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THE CHILDREN'S BUREAU

Department of Commerce and Labor

U. S. CHILDREN'S BUREAU

Washington

ESTABLISHMENT OF THE BUREAU.

The Children's Bureau was established by an act of Congress approved April 9, 1912, and began active operations upon the passage of the legislative, executive, and judicial appropriation bill on August 23, 1912. The text of the law establishing the Bureau is as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established in the Department of Commerce and Labor a bureau to be known as the Children's Bureau.

SEC. 2. That the said bureau shall be under the direction of a chief, to be appointed by the President, by and with the advice and consent of the Senate, and who shall receive an annual compensation of five thousand dollars. The said bureau shall investigate and report to said department upon all matters pertaining to the welfare of children and child life among all classes of our people, and shall especially investigate the questions of infant mortality, the birth rate, orphanage, juvenile courts, desertion, dangerous occupations, accidents and diseases of children, employment, legislation affecting children in the several States and Territories. But no official, or agent, or representative of said bureau shall, over the objection of the head of the family, enter any house used exclusively as a family residence. The chief of said bureau may from time to time publish the results of these investigations in such manner and to such extent as may be prescribed by the Secretary of Commerce and Labor.

SEC. 3. That there shall be in said bureau, until otherwise provided for by law, an assistant chief, to be appointed by the Secretary of Commerce and Labor, who shall receive an annual compensation of two thousand four hundred dollars; one private secretary to the chief of the bureau, who shall receive an annual compensation of one thousand five hundred dollars; one statistical expert, at two thousand dollars; two clerks of class four; two clerks of class three; one clerk of class two; one clerk of class one; one clerk, at one thousand dollars; one copyist, at nine hundred dollars; one special agent, at one thousand four hundred dollars; one special agent, at one thousand two hundred dollars, and one messenger at eight hundred and forty dollars.

SEC. 4. That the Secretary of Commerce and Labor is hereby directed to furnish sufficient quarters for the work of this bureau at an annual rental not to exceed two thousand dollars.

SEC. 5. That this Act shall take effect and be in force from and after its passage.

Approved, April 9, 1912.

The suggestion for the establishment of a children's bureau was first made by Miss Lillian D. Wald, head of the Nurses' Settlement in New York. Her conception of a Federal bureau devoted to the study and popularization of the needs of children appealed not only to a great number of the most authoritative individuals and organizations engaged in work for children, but also to the general public, which, through the work of the Department of Agriculture, was prepared for similar governmental service in the interests of children. A bill for the establishment of the Bureau was introduced in Congress in the winter of 1905-6, through the efforts of the National Child Labor Committee and many cooperating agencies. Although indorsed by the President and by members of the Cabinet, and warmly advocated by Members of both House and Senate, the bill failed to reach a vote. In the Sixtieth Congress (1908-9) the bill was reintroduced; it received the approval of the regular committee to which it was referred, and it was made the subject of a special message by the President, but it again failed to reach a final vote. In the Sixty-first Congress (1909-10) it had a similar history. The Sixty-second Congress passed the bill, and it was approved by the President.

SCOPE OF THE BUREAU.

TERMS OF THE ACT.

The act establishing the Bureau provides that it shall investigate and report upon all matters pertaining to the welfare of children and child life among all classes of our people, and shall especially investigate the questions of infant mortality, the birth rate, orphaned children, juvenile courts, desertion, dangerous occupations, accidents, and the needs of children, employment, and legislation affecting children in the several States and Territories.

THE INTENTION OF CONGRESS.

The Senate Committee on Education and Labor, to which was referred the bill to establish the Children's Bureau, said in its report:

The bill as drawn and recommended for passage confines the function of the Bureau primarily to the question of investigation and reporting the same, the design and purpose being to furnish

tion in this general way from all parts of the country to the respective States to enable them to deal more intelligently and more systematically and uniformly with the subject. The bill is not designed to encroach upon the rights nor relieve the States from the duty of dealing with this subject, but to furnish the information to enable them to more successfully deal with it. It was the opinion of the committee that the duty devolves primarily upon the States to legislate upon this important subject, and the States can more effectively deal with it. But it seemed to the committee that there was a duty upon the part of the National Government to aid in getting information and data with a view of assisting in this work, and that the National Government could get such information and data more effectively than the respective States.

PLANS FOR IMMEDIATE WORK.

The first work of the new Bureau will be to bring together the existing material on the subjects within its scope, so that it may make a thorough survey of the field and avoid duplicating work which has already been done either by public or private agencies.

STATISTICAL HANDBOOK.

The United States Government through various bureaus has already collected much statistical material relating to children, but it is scattered through many publications and has never been brought together and correlated by persons interested primarily in children. The Bureau will proceed to bring this material together, and, using it as a basis, will issue a convenient handbook of statistics of children, so that the important data which the Government has compiled may be readily available for all agencies engaged in work for children.

LIBRARY OF CURRENT PUBLICATIONS.

Current literature, both in this country and abroad, is rich in matter relating to children. The office of librarian-reader has therefore been established, requiring the services of one who is not only a trained and experienced librarian, but is also thoroughly familiar with the principal modern languages and trained in sociology and economics, so that it will be possible to select, translate if necessary, and prepare for immediate use the significant material published on child problems.

LEGISLATION AFFECTING CHILDREN.

The law obviously intends that the Bureau shall become a clearing house for information regarding actual or pending legislation in the several States affecting children. This legislation should be digested in those cases in which the work has not already been done by some

other Government bureau or by some private agency.¹ The necessity for digests is obvious, in view of the important part played by the law in many of the problems of child welfare.

ORIGINAL INVESTIGATION OF INFANT MORTALITY.

The Bureau will begin at once an original investigation of infant mortality, because conditions existing in this country show its urgency and because it is fundamental to the later work of the Bureau. This inquiry will be directed especially toward the social aspects of the problem. It will not duplicate the work of other governmental or volunteer agencies. The field at present will be confined to a few comparatively small communities.

BIRTH REGISTRATION.

Because the importance of adequate birth registration in reducing infant mortality is universally recognized, the Bureau will cooperate with the organizations, governmental and volunteer, now working for registration in this country. The New England States, Pennsylvania, and Michigan were in 1910 the only States included by the Census Bureau in the registration area for births as having laws for birth registration so enforced as to give reasonably satisfactory results. In most of the States births are not properly recorded, either because there is no law requiring their registration or because the existing law is inadequate or is not enforced. Unless the local social agencies working for the welfare of babies can learn of the birth of a child they can not directly help that child. Unless there can be secured reliable knowledge as to children born, there can be no reliable knowledge as to the birth rate, nor as to the proportion of children who die.

The general recognition of the necessity for registration is well indicated by the fact that the General Federation of Women's Clubs at their biennial meeting held at San Francisco in July, 1912, passed a resolution calling upon the Bureau to prepare in brief popular form material showing the necessity for birth registration and the best method of securing it. The Bureau is now preparing material in compliance with this request.

POPULAR PAMPHLETS.

The Bureau will also issue from time to time brief popular pamphlets on other subjects assigned to it by law. These pamphlets will be designed for wide distribution, and if necessary will be translated into foreign languages.

¹The Census Bureau, the Bureau of Labor, and the Russell Sage Foundation have done considerable work of this nature, and doubtless other valuable digests are available.

It is clearly recognized that the program thus mapped out is a mere beginning and that the field of the Bureau is far wider than these first plans would indicate, but it will be some time before the Bureau can do more than to endeavor to carry out this program. Suggestions for further work will, however, be carefully considered at any time.

It must be borne in mind that the Children's Bureau has no power to do administrative work. It can not make any regulations concerning children, nor create any institutions for them. Its duty is solely to study and report upon conditions affecting the welfare of children. It may publish facts it secures, in any form approved by the Secretary of the Department of Commerce and Labor. It will endeavor to secure pertinent facts and to present them promptly and clearly for use and popular distribution. Its effectiveness must depend upon the use made of these facts by the people of the United States.



U. S. DEPARTMENT OF LABOR
CHILDREN'S BUREAU

JULIA C. LATHROP, Chief

BIRTH REGISTRATION

AN AID IN PROTECTING
THE LIVES AND RIGHTS
OF CHILDREN

MONOGRAPH No. 1

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CONTENTS.

	Page
Birth registration in United States.....	5
Definition and value.....	5
Birth registration and infant mortality.....	5
Investigation of infant mortality.....	5
Probable extent of infant mortality.....	6
Social significance of infant mortality.....	7
Infant mortality preventable.....	7
Birth registration helps to reduce infant mortality.....	7
Prevention of blindness of the newborn.....	9
Promptness a factor.....	9
Immediate effects.....	9
Results in New Zealand.....	10
Vital statistics the barometer of infant mortality.....	10
Relation of birth registration to education, employment, etc.....	11
Birth registration a protection for children at school and at work.....	11
Birth registration protects personal and property rights.....	12
Widening use of birth records.....	13
Birth registration in Jamaica.....	16
One view of the uses of birth registration.....	16
Present status of birth registration.....	16
Methods of securing birth registration.....	19

BIRTH REGISTRATION.

BIRTH REGISTRATION IN UNITED STATES.

Definition and value.—Birth registration means the record in public archives of the births of children. In the civilized countries of Europe it has long been complete. It is, of course, the first item in vital statistics. In the United States birth registration has made progress less rapidly than the other items of a complete system of vital statistics, notably, death registration and the registration of marriages. While the importance of such statistics has been recognized in certain parts of America from colonial days, the country as a whole is still devoid of uniform and complete records of the births of its citizens. This neglect is undoubtedly to be ascribed to the lack of a popular conviction that such records are dignified and valuable. Everybody agrees that it is dignified and valuable to make public record of marriages and deaths. Only a moment's thought is necessary to show that the public record of births is of kindred importance, and for the same reason, to protect individual and property rights.

Moreover, as a working expedient it is coming to be regarded as indispensable in the eradication of three great evils which affect the children of the country. There are no more important undertakings at the present day than the reduction of infant mortality, the preservation of the child's right to education, and the abolishing of child labor. In serving all three of these ends birth registration is an indispensable practical aid.

BIRTH REGISTRATION AND INFANT MORTALITY.

Investigation of infant mortality.—The Children's Bureau is especially directed by the law under which it was established to investigate infant mortality, or the deaths of babies under 1 year old. In the effort to comply with the law the bureau is hampered at every step by the limitations created by the imperfect collection of birth statistics in this country. To study infant mortality it is necessary to know how many babies have been born and how many have died before they were 1 year old. In other words, a complete and uniform system of birth registration as well as an accurate system of death registration in any community in which the bureau's

study of infant mortality is undertaken is a prerequisite if the work is to be done in the most effective and economical way. With the present status of birth registration in the United States, the bureau is not free to make its choice of territory to be investigated, solely according to location, industrial conditions, racial composition of the population, and other factors legitimately influencing such a choice, but must consider also the effectiveness of birth registration. As an illustration of the extent to which the limitation operates it may be cited that in selecting a single small city for beginning its first investigation of infant mortality the bureau, on account of the generally prevailing defective registration, had less than a dozen cities from which to choose.

Probable extent of infant mortality.—There are no complete records for the United States as a whole which show how many babies are born and how many babies die year by year, but Dr. Cressy L. Wilbur, vital statistician of the Census Bureau, estimates that approximately 300,000 babies die yearly in the United States before reaching the age of 1 year. A calculation based on census figures indicates that in the 10-year period between the last two enumerations of the census more than 2,500,000 of the children born in this country died before they reached the age of 1 year.

The details of these figures are given below, column 3 presenting an estimate for the entire country based on the true figures in columns 1 and 2:

Year.	Deaths of infants under 1 year of age in registration area. ¹	Per cent which population of registration area formed of total population. ²	Estimated deaths under 1 year of age in United States. ³
1901.....	97,477	40.3	241,878
1902.....	98,575	40.4	243,998
1903.....	96,857	40.4	239,745
1904.....	102,880	40.4	254,653
1905.....	105,553	40.4	261,270
1906.....	133,105	48.9	272,198
1907.....	131,110	49.2	266,484
1908.....	136,432	52.5	259,870
1909.....	140,057	56.1	249,656
1910.....	154,373	58.3	264,791
Total.....	1,196,419	.....	2,554,543

¹ Figures taken from Bureau of the Census Mortality Statistics for the respective years.
² Figures taken from Bureau of the Census Mortality Statistics for 1910.
³ On the basis that the ratio of infant deaths to population is the same for the country as a whole as it is for the registration area.

What do these figures mean? In terms of total population, it is as if Chicago, the second city of the United States, were to be wiped out of existence once every 10 years, not a single life being saved. It means the annihilation each decade of a population as large as that of the State of New Jersey, and greater than that of such States

as Alabama, California, Iowa, Kentucky, Minnesota, North Carolina, Tennessee, Virginia, or Wisconsin. In fact, only 10 States in the Union had each in 1910 a population as great as the infant mortality for the preceding decade. This mortality nearly equaled the combined population of Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada.

Social significance of infant mortality.—A report of the International Congress on Prevention of Infant Mortality, prepared under the direction of Prof. Dietrich, of Berlin, said:

It was formerly believed that the rate of mortality among children who had not reached the first anniversary of their birth was a wise dispensation of nature intended to prevent children with a weak constitution from becoming too plentiful. To-day we know that a great infant mortality is a national disaster—on the one hand because numerous economic values are created without purpose and prematurely destroyed, and on the other because the causes of the high rate of infant mortality affect the powers of resistance of the other infants and weaken the strength of the nation in its next generation.

Dr. J. W. Schereschewsky, of the United States Public Health Service, in a recent address said:

The mere business of being a baby must be classified as an extra-hazardous occupation, since the perils which ever encompass human existence are never so bitterly emphasized as in the first year of life. * * * A necessary sequence to a high infant mortality rate is the larger number of children who, having weathered the storms of the first year, reach the haven of comparative safety of the other years of life in a battered, weakened, and crippled condition such as forever handicaps them in becoming efficient social units. It is therefore in the nature of an axiom that, in the degree to which the infant mortality rate is lowered, to a far greater degree will we diminish the great army of defective and degenerate children among us.

Infant mortality preventable.—If none of these infant deaths was preventable, we should have no stimulus for trying to find a remedy. But we are assured by the highest authorities that the number of deaths can be greatly reduced if we apply the best methods of the growing science of sanitation. Indeed, one great authority says that if children were well born and well cared for the infant mortality rate would be negligible. The New York State Department of Health has adopted for its legend these words: "Public health is purchasable; within natural limitations a community can determine its own death rate." Is not this statement a challenge to the patriotism of all public-spirited citizens? If it can be shown that birth registration can aid in preventing infant mortality, shall we not secure and utilize it?

Birth registration helps to reduce infant mortality.—The birth record is a safeguard for the newly born child. It furnishes to the health officer and the visiting nurse the name and address of every baby, and the community is thus enabled to send to the family in adverse circumstances a knowledge of hygiene and sanitation which

may save the life of the child. Dr. S. Josephine Baker, director of the Bureau of Child Hygiene of the New York City Department of Health, says:

The birth record is perhaps the starting point of about 75 per cent of our effective baby-saving work. * * * Under the present system we use the information contained on the birth returns in order that a nurse may be sent at once to see the mother and put her in touch with the various agencies that may be of service to her and at the same time give her instruction in baby care.

Dr. W. C. Woodward, health officer of the District of Columbia, describes in the following paragraph the reduction in the infant death rate which has taken place in the District within the last few years. It will be seen that the registration of births furnishes the indispensable starting point of his work:

In the District of Columbia between 1907 and 1912 death rates of white infants in the first year of life living on streets fell from 121 to 100 and among those living in alleys from 213 to 98; and among colored infants living on streets from 299 to 269 and among those living in alleys from 307 to 262. These rates are computed on the basis of the population corresponding in each instance in age, race, and location. Unfortunately the births registered in the District during the years named were not distributed according to alley and street residence of the mothers, and death rates can not be computed on the number of children born. That the diminished mortality is not as a whole due to the diminution in the number of births is shown, however, by the fact that from 1907 to 1912 the death rate of all white infants, computed on the basis of reported births, fell from 113 to 90, and the death rate of colored infants, similarly computed, fell from 263 to 208.

No one will deny, of course, that many factors tending to decrease infant mortality have been operative during the period covered by the foregoing statement. Certainly, however, some weight must be given to the fact that as early as 1907 the health department of the District began sending to the mother of each child born, upon the receipt of the birth report, printed instructions relative to the care of her baby, and that in 1908 the health department arranged for nurses in the service of the Instructive Visiting Nurses' Society to visit promptly every baby reported as having been born under the administrations of a midwife and certain other cases where there was reason to believe that the child had been born amid destitution and ignorance, and these measures for the prevention of infant mortality have been kept up ever since.

The report for 1911 of the committee on birth registration of the American Association for Study and Prevention of Infant Mortality, of which Dr. Wilmer R. Batt, of Harrisburg, was chairman, says:

The birth registration bureau in any locality should be the starting point of every line of prevention of infant mortality. Why should the visiting nurse or the medical inspector go groping blindly around the courts and tenements seeking babies, when a properly conducted birth registration bureau should send them on their journeys with absolute directness? * * * There is ample ammunition upon every standard birth certificate to equip every inspector in advance of house visitation with knowledge of the most vital character. The visiting nurse knows the plague spots of her particular district; she knows where poverty and overcrowding exist, where contagious diseases thrive, where dirt abounds, and where sunshine never penetrates. The mere statement of locality upon the birth certificate should bring the individual picture before her.

Prevention of blindness of newborn.—Ophthalmia neonatorum, or blindness of the newborn, is generally estimated to be responsible for at least 25 per cent of all cases of blindness among children under observation in schools for the blind. According to all authorities the disease is easily preventable. Certain cities, through their public health departments, are now furnishing the standard remedies free of charge and are striking at the trouble through their increasingly effective staffs of municipal nurses. It will be readily seen that any follow-up system of this character will be furthered by the prompt registration of births. In several States the birth certificate is used as a means of obtaining information as to whether the attending physician or midwife used any preventive for ophthalmia neonatorum. In some States the failure to answer the question upon the birth certificate "Were precautions taken against ophthalmia neonatorum?" renders unlawful all bills or charges for professional services in connection with the case. The birth certificate used in Boston contains a special notice to physicians in the form of an extract from the law covering the reporting of cases of ophthalmia neonatorum.

Promptness a factor.—The promptness of the notification of births is an important factor. The commissioner of health of Milwaukee in his 1912 report says that while now the reporting of births is prompt in that city, and fairly satisfactory, "in former years, when physicians and midwives were given 30 days in which to file reports, the reports were either forgotten or overlooked, with the result that 45 per cent of such births have never been reported and therefore are not on file in this department." Dr. Woodward, health officer of the District of Columbia, says: "Promptness is a first requisite for preventive work." This is evidenced by the study of such vital statistics as we have. Of the 154,373 infants in the registration area in 1910 who died before they were 12 months old, 14,946 lived less than one day, 36,351 less than one week, and 58,089 less than one month. If these children who die within the first few weeks of life are to be benefited by registration, obviously the registration must be prompt. We need quick notification, not for statistical purposes, but for the purpose of saving lives. It has been demonstrated in certain American cities, and in England (where the immediate notification of births act requires registration within 36 hours), that prompt and authoritative notification serves greatly to increase the efficiency of the baby-saving agencies.

Immediate effects.—The manifold ways in which cooperation between public and private effort tends to conserve the public health of infants is of course familiar to the general public in the great cities of this country. It is safe to say that wherever an area especially unfavorable to infant life has been studied and helped by

doctors and nurses and sanitary authorities there has been shown an immediate lessening of infant deaths. Thus a certain area of Philadelphia, a registration city, where vigorous baby-saving work was undertaken, showed a reduction in 1911 of 11.3 per cent in all deaths under 1 year from the 1910 figures and of 34.6 per cent in diarrheal deaths under 2 years. The beginning of the most effective work of this type must be the prompt recording of births, so that the doctors and nurses will know where to begin.

Results in New Zealand.—In New Zealand, where birth registration has existed for years, according to the last report of the Society for the Health of Women and Children, the city of Dunedin shows a stable and sustained decline in the infant death rate from 1907, when this society began its operations, until in 1912 it was only 3.8 per every 100 births, probably the lowest rate in the world. The work of the society is described in a pamphlet issued by the Children's Bureau¹ which shows the way in which organized groups of citizens direct the work, cooperate in locating the places where assistance is needed, and through visiting nurses, correspondence with mothers, instruction of young girls, etc., stimulate interest in the health of the community. Pamphlets on the care of the baby are published by the Government and issued free to parents on the occasion of registering a birth. A letter from Mr. William Jenkins, foreign correspondent for the society, points to the value of registration in its baby-saving work, and says "Registration of births and deaths in New Zealand is accurate. Failure to comply with the Government regulations in this respect is a very serious offense."

Vital statistics the barometer of infant mortality.—When we have adequate birth and death registration all over the country, the public-health authorities can watch the infant mortality rate as the weather man watches his barometer, and they can pick out areas of social storm just as the weather man traces areas of ordinary storm, but with this one great difference: With our present knowledge the weather man can not change the weather, but the public-health official can change the infant-mortality rate, for, as the expert medical men tell us, half of the present infant mortality could be prevented if the methods already known to the medical and sanitary science could be given general application.

RELATION OF BIRTH REGISTRATION TO EDUCATION, EMPLOYMENT, ETC.

Birth registration a protection for children at school and at work.—Enforcement of child-labor laws and compulsory education laws should dovetail and both must rest on a basis of birth registration. Our legislatures enact laws prescribing ages within which children

¹ New Zealand Society for the Health of Women and Children, Children's Bureau, Department of Labor, Washington, D. C.

shall attend school and below which they shall be protected from employment, but the State can not enforce those laws justly if it possesses no public record of the age of the children.

The 1910 Census report gives the number of illiterates 10 years of age and over in the United States as 5,516,163, of which number more than two-thirds are native born, and says:

The differing percentages of illiteracy in the various classes of the population reflect the educational opportunities which have been open to them. * * *

Education for children can not be made entirely effective without birth registration. If a community is going to grapple intelligently and effectively with the problem of illiteracy, the school authorities must know the age of every child, so as to secure his attendance at school as soon as he reaches the legal age and retain him as long as the law allows. This requires birth registration.

In many parts of this country European-born children stand a better chance of being able to prove their age than do children born here, because in every other civilized country such records have long been scrupulously kept. An Italian family—father, mother, and eight children—who had survived the Messina earthquake, came to the United States and applied for work certificates in Chicago for the two oldest girls, Chiara and Giovanna, who, they said, were 16 and 14, respectively. Chiara secured work, but Giovanna, who was deaf and apparently subnormal, was refused a certificate and sent back to school. Later when the parents again applied for a certificate for Giovanna, the Chicago Associated Charities wrote to Messina asking for birth records. Notwithstanding the confusion and ruin wrought by the earthquake the public records had been so well preserved that the authorities were able to reply at once with copies showing that Chiara was at the time not yet 14—although she had been at work for two years—while the younger girl was 12 instead of 14. If the Messina records had been consulted at the start, these little girls would have had two and four years of schooling, respectively, in schools especially equipped to give foreign children a start in American life.

There is no doubt that many a foreign-born child has lost years of American schooling because he was not required to furnish a birth record. Yet it is hardly consistent for the United States to demand of foreign-born children what it does not provide for its own children. The practice of sending for foreign birth records is growing, but it is credibly reported in some quarters that immigrants, unable to see the monetary value of school training, have discovered a new way of evading the compulsory education law. An expert of the bureau reports that some foreign-born children who do not wish to "waste more time in school," finding that American children are excused from providing birth certificates when there are none available, have

been claiming that they were born in this country. With our lack of records this claim is not easily disproved and the affidavits of uncomprehending parents may launch the children industrially.

The commissioner of health in Milwaukee, reporting for the year 1913, says:

There have been 370 boys and girls seeking employment who have requested a record of their birth, 183 of which had never been reported or found.

That is to say, nearly half of this group of children were deprived of the protection of a legal birth record.

Sometimes it is felt that the requirement of a birth certificate is a hardship and that it puts applicants to undue inconvenience. The records of the Manhattan employment office show that when birth registration is well enforced this method of proving birth is most expeditious and convenient. Thus the New York child-labor law requires the furnishing of a birth certificate, and under the law the simple affidavit of parents can not be accepted. If the child was born in New York City the certificate can be secured instantly from the office of the board of health, where the employment certificate is also secured, the entire operation requiring only a few moments. If there is no birth certificate, delay is necessary, and if no documentary proofs can be secured it is necessary to secure the certificate of two physicians and a period of three months must elapse before the child can finally be granted his employment papers.

Birth registration protects personal and property rights.—The offices of American consuls abroad and of foreign consuls in this country have many cases of loss of property or loss of legal rights in the old country because of the impossibility of establishing a birth record in this country for the children of immigrants.

In a pamphlet describing the value of vital statistics, the Washington State Board of Health quotes the following instance:

A girl was born in Spokane about 20 years ago, whose parents were from Norway. About two years ago her father returned to his old home for a visit, taking his daughter with him. The local registrar of that city gives her story as follows:

“About a year ago a foreigner went to visit his old home, from this city, taking with him his daughter. While there he died and the daughter came back. She was then 18 years of age. Upon reaching Castle Garden she was refused admittance to the United States. She was born and raised in Spokane and received her education in the Spokane schools, but unless she could prove her identity as an American citizen she could not be admitted. Our office was appealed to. There was no record of her birth, and only by strenuous effort on our part, hunting here and there, did we eventually find a woman who was present at the birth of this girl, and who could make affidavit of the fact that she was born in this city. After the girl had been detained over a month, the immigration authorities finally accepted this lady's affidavit and permitted her to land. She was born here, and yet, if it had not been for the fortunate circumstances of a witness being still alive she would have been unable to return to the land of her nativity. If public sentiment were aroused as to the necessity of vital statistics it would help immeasurably.”

From Indiana come the following instances, vouched for by Dr. Hurty, secretary of the Indiana State Board of Health:

A farmer in Indiana left his valuable farm in trust to his unthrifty son, to go to his granddaughter on her twenty-first birthday. When she believed she was 21 and claimed her inheritance, her father disputed her age, saying she was only 19. The family Bible was consulted, but the leaf with the record was gone. The court was in a quandary. At last a neighbor remembered that a valuable cow belonging to the grandfather had given birth to a calf on the day the girl was born, and he could swear to the coincidence; perhaps the grandfather had recorded the date of the birth of the calf. His farm books showed that he had done so, and the date of birth of the girl was thus established. This story has a cheerful ending; in too many instances hardship and loss have been suffered because of a similar lack of indisputable birth records.

Birth certificates are likewise of the utmost importance in proving one's rights to an inheritance. A certificate of the standard form provides for the registration of a person's parentage as well as of the date and place of his birth. Oftentimes it is extremely difficult to prove that a given person is the next of kin to a decedent and, in consequence, is entitled to any estate. A case of this kind was recorded some time ago in Indiana. A young man from Switzerland came to that State with his wife, settled there, and in time became the father of a little girl. When the child was 3 years old the father was killed in a sawmill accident and left his wife penniless. Without friends or relatives, she went to work as a laundress and struggled on in a vain effort to rear her child. Finally came the news that the child's paternal uncle had died in Switzerland and had left \$12,000 to his brother's child. The money was awaiting the girl upon proof that she was the issue of the dead man's deceased brother. But the doctor who delivered the child's mother was dead, the mother's testimony was invalid, the child lost the inheritance, and, despite the greatest efforts, never received a dollar of the legacy. Had there been a law registering the birth of the child, the Swiss Government would have accepted this without question and would have awarded the child the legacy. As it was, she lost it irrevocably and was consigned to a life of drudgery.

Widening use of birth records.—The growing appreciation of the use of birth records may be seen by the increased frequency with which calls for copies of records and information contained in them are made upon the birth registration department of New York City. In 1906 there were 2,802 certified copies of records of birth issued for legal purposes, and in addition there were 48,580 free statements issued as to date of birth for school and employment purposes. In 1913 there were 15,495 searches of the birth records made and 123,347 free statements issued for school and employment purposes. That is to say, the birth records on file in New York City helped to enforce the personal or property rights of 138,842 persons in 1913.

In Montclair, N. J., as soon as a certificate of birth is filed a transcript is made on a specially made, attractive form, and sealed with the official seal of the office. This copy is mailed to the parents of the child with a letter in which the importance of birth registration is outlined and request is made that the record be returned for correction if errors are noted. The letter follows:

The accompanying certificate of birth is an exact copy of the original certificate that is on file at this office. As this is a permanent record, a record by which a child

may be admitted to school; a record by which he (or she) may prove that he is of sufficient age to leave school and go to work; a record by which he may prove his right to vote, or to marry, or to come into possession of money that has been left to him; a record by which he may prove his place of birth or age as a prerequisite to holding certain public offices, it is imperative for the future good of the infant himself that all the facts recorded at the time of his birth shall be accurate, and you are therefore requested to return this certificate for correction if any inaccuracy is noted. It is of particular importance that the names of the infant and of both parents shall be spelled correctly. If the name of the infant is changed the certificate should be returned at once for correction.

A certificate similar to the inclosed form has been sent to the parents of every child born in Montclair since January 1, 1914, and you will confer a favor upon your friends by urging them to secure such a certificate if they have a child for which a certificate has not been received, for there may be some infants whose births have not been recorded at this office and who may thereby be put to great inconvenience in later years. Parents who so desire may obtain, free of charge, certificates for children whose births occurred in Montclair prior to January 1, 1914, by making application at the office of the board of health, Municipal Building, Montclair, N. J.

The health officer of Montclair in his report for 1913 says:

We expect that the school authorities will cooperate by requiring the presentation of a birth certificate upon admission to school, so that we will thereby obtain a check upon the records of children born four or five years ago.

The Minnesota State Board of Health has a weather-proof notice for tacking up in the open, on trees, etc., showing the importance and value of birth registration and the legal penalties for neglecting to report births and deaths.

The November, 1913, bulletin of the Virginia State Board of Health gives some interesting figures for that State:

A high stillborn rate means that we are either careless or criminally negligent in the care of our women during pregnancy and at delivery. Measured by this standard there is ground for grave concern in the fact that 2,291 children were reported still-born in Virginia during the last year. * * * *We had no idea that this state of affairs existed until we were able to compile vital statistics from accurate reports of births and deaths, and we could not have discovered such a situation without such statistics. But now that we have them we can certainly utilize them profitably in the prevention of needless deaths.*

Many of the States are using birth registration as a basis for popularizing information on the care of children. The State Board of Health of Indiana, for instance, has issued a most attractive "Mother's Baby Book," which is sent to each mother when the birth of her child is reported. Similar publications are now being prepared by other States, notably New York and North Carolina.

It is noteworthy that the new baby score card of the American Medical Association includes a rating for the birth certificate.

The American Association for the Study and Prevention of Infant Mortality, representing an affiliated membership of nearly a hundred societies and many children's hospitals, dispensaries, and nursing associations, makes birth registration a fundamental factor in its program.

The special Public Health Commission of the State of New York, whose report to the governor February 19, 1913, startled the State, said:

The first step in a comprehensive plan for safeguarding public health for the State as a whole is an adequate birth-registration law efficiently and uniformly enforced throughout the State. The enactment of such a law and the initial steps in its enforcement rest upon the State.

The matter was taken up immediately by the State legislature and the present excellent State birth-registration law passed in the same session.

In April of this year (1914) the citizens of Chicago held a "Baby week" to inaugurate a summer campaign for the better care of babies, and one of the subjects urged as fundamental was a prompt reporting of the births of Chicago babies.

Various patriotic societies, such as the Daughters of the American Revolution and the Colonial Dames, have lately called attention to the importance of birth registration in establishing the right to join these associations and have added their influence to the movement. The first edition of this pamphlet was prepared at the instance of the General Federation of Women's Clubs.

During the past year, in cooperation with the Bureau of the Census and the General Federation of Women's Clubs and other volunteer bodies, the Children's Bureau has been carrying on a test in various States as to the accuracy of birth registration as it now exists. The purpose of this test is twofold: First, to secure for the vital statistician of the Census Bureau material by which to judge of the efficiency of enforcement in various localities and the causes of failure, where failure is found; and, second, to interest people in birth registration in their own towns. This test as carried on in one city where there is an excellent registration law lately passed and obviously not thoroughly administered, showed out of 150 cases examined by the Visiting Nurses' Association, 68 unregistered cases, while in a New England city in the registration area it was found that in the poorest quarters of the town only about 50 per cent were registered. Undoubtedly in both cases the registration would make a better showing in the more prosperous quarters of the city. The report will be published by the Children's Bureau.

A correspondent engaged in this test writes of her city:

The work has already borne results, as one physician, who declared that he would rather go to jail than report, is sending in a great many, and we have got one of the worst midwives in line. She had not made a report for a year—now sends in all.

Birth registration in Jamaica.—An American traveler in Jamaica reports:

I recently made a trip to Jamaica, B. W. I., and in traveling about the island noticed that in every little settlement the only visible sign of government—aside from

the policemen—was the omnipresent sign “Registrar of births and deaths.” * * * The territory of the whole island is divided into small registration districts and a small fee, from 9 pence to 1 shilling, is paid by the Government, I understand, for each registration of the registrar.

One view of the uses of birth registration.—The late Dr. Frank W. Reilly has epitomized some of the uses of birth registration as follows:

There is hardly a relation in life from the cradle to the grave in which such a record may not prove to be of the greatest value. For example, in the matter of descent; in the relations of wards and guardians; in the disabilities of minors; in the administration of estates; the settlement of insurance and pensions; the requirements of foreign countries in matters of residence, marriage, and legacies; in marriage in our own country; in voting and in jury and militia service; in the right to admission and practice in the professions and many public offices; in the enforcement of laws relating to education and to child labor, as well as to various matters in the criminal code—the irresponsibility of children under 10 for crime or misdemeanor, the determination of the “age of consent,” etc.

Physicians and others wishing a more detailed study of the subject of vital statistics as a whole will find this material in a recent pamphlet written by Dr. John W. Trask, Assistant Surgeon General of the United States Public Health Service, and issued by the Public Health Service.

PRESENT STATUS OF BIRTH REGISTRATION.

In view of the uses to which birth registration can be put in preserving the lives and rights of children, the following statements are submitted as to the present status of birth registration in the United States. It will be seen that certain States need new laws, others need important amendments, and all States need increased public interest in order that the enforcement of the laws may be secured.

Although we have no complete records for the United States as a whole, there are certain States and cities in which the facts are carefully recorded; the New England States, Pennsylvania, and Michigan being the eight States which the United States Bureau of the Census includes in its provisional birth-registration area. To this list of States are added two cities, New York City and Washington, D. C. That any one of these units secures absolutely perfect registration is not claimed. The secretary of the Commonwealth of Massachusetts, in his 1910 report on “Births, marriages, and deaths in Massachusetts,” said:

Again, I wish to mention that the number of births reported in the State does not include all the births that take place, as a great many physicians neglect entirely to report the births at which they are present.

The National Government can and does tell us exactly how great is the accession to our population each year by immigration, or intake from foreign lands. At each port of landing immigration inspectors record each arrival and tell us his or her nationality, age,

sex, destination, and how much money each one brings. But the National Government can not go into the States and cities and establish registration offices and tell us how many children enter each State by birth. This work must be done by each State separately. We have no national bookkeeping to account for the ebb and flow of human life as an asset and a liability of our civic organism. We have no national records to give our sanitarians and students a basis for their preventive studies. Congress by resolution¹ has urged the States to enact and enforce suitable registration legislation. The State governments must now act. By uniform laws well enforced the States acting together can give the United States a system of vital statistics, and in no other way can this be secured.

It is fair to say that there is a steadily increasing sense of the value of vital statistics, and that the number of States with good laws increases yearly. At the present time, as shown on the map on the front page of this bulletin, good birth registration laws have been enacted in 32 States and the District of Columbia, although their enforcement does not yet meet the census requirements. These States are:

Arkansas.	Maryland.	New Jersey.	Utah.
Connecticut.	Massachusetts.	New York.	Vermont.
District of Columbia.	Michigan.	North Carolina.	Virginia.
Florida.	Minnesota.	North Dakota.	Washington.
Georgia.	Mississippi.	Ohio.	Wisconsin.
Idaho.	Missouri.	Pennsylvania.	Wyoming.
Kansas.	Montana.	Rhode Island.	
Kentucky.	Nebraska.	South Carolina.	
Maine.	New Hampshire.	Tennessee.	

In the following States either new laws or important amendments are considered necessary:

Alabama.	Delaware.	Louisiana.	Oregon.
Arizona.	Illinois.	Nevada.	South Dakota.
California.	Indiana.	New Mexico.	Texas.
Colorado.	Iowa.	Oklahoma.	West Virginia.

By using an estimate founded on the number of babies under 1 year of age reported at the last census, April 15, 1910, added to the number of babies who died in the same year, and comparing with this estimate the number of births which were actually registered, figures may be obtained which indicate roughly the efficiency of the birth registration in the different States. The following table shows these figures.

¹ February 11, 1903.

ESTIMATED NUMBER OF BIRTHS IN VARIOUS STATES COMPARED WITH REGISTERED BIRTHS.

States.	Population under 1 year of age Apr. 15, 1910.	Deaths of infants under 1 year of age 1910. ¹	Estimated number of births 1910.	Births registered in 1910.	Per cent of estimated number of births registered.
Continental United States.....	2,217,342	.....	.....	.....	.....
New England:					
Maine.....	15,010	2,108	17,118	15,578	91.0
New Hampshire.....	8,825	1,373	9,698	9,385	96.8
Vermont.....	7,233	791	8,024	7,351	91.7
Massachusetts.....	70,734	11,377	82,111	86,766	105.7
Rhode Island.....	11,728	2,129	13,857	13,439	97.0
Connecticut.....	24,197	3,476	27,673	27,291	98.6
Middle Atlantic:					
New York.....	191,553	27,503	219,056	213,235	97.3
New Jersey.....	56,198	8,363	64,561	53,942	83.6
Pennsylvania.....	189,502	28,377	217,879	202,643	93.0
East North Central:					
Ohio.....	98,776	11,445	110,221	100,969	91.6
Indiana.....	56,098	5,996	62,094	56,309	90.7
Illinois.....	125,159	12,516	137,675	82,181	59.7
Michigan.....	62,050	7,912	69,962	63,566	90.9
Wisconsin.....	52,027	5,621	57,648	50,847	88.2
West North Central:					
Minnesota.....	46,111	4,261	50,372	43,840	87.0
Iowa.....	49,190	4,819	53,009	35,776	67.5
Missouri ²	73,929	7,393	81,322	.....	.....
North Dakota.....	16,989	³ 1,699	18,688	⁴ 9,199	⁵ 49.2
South Dakota.....	15,518	1,552	17,070	12,555	73.6
Nebraska.....	28,820	2,882	31,702	24,858	78.4
Kansas.....	38,931	3,893	42,824	22,320	52.1
South Atlantic:					
Delaware.....	4,180	418	4,598	2,373	51.6
Maryland.....	27,864	4,239	32,103	20,568	64.1
District of Columbia.....	5,489	1,068	6,557	7,016	107.0
Virginia ²	56,168	5,617	61,785	.....	.....
West Virginia.....	35,729	3,573	39,302	26,165	66.6
North Carolina ²	72,605	1,330	73,935	.....	.....
South Carolina ²	47,405	4,741	52,146	.....	.....
Georgia ²	77,737	7,774	85,511	.....	.....
Florida.....	19,972	1,997	21,969	(⁴)	(⁴)
East South Central:					
Kentucky ²	61,106	6,111	67,217	.....	.....
Tennessee.....	62,403	6,240	68,643	51,256	74.7
Alabama.....	64,512	6,451	70,963	37,231	52.5
Mississippi ²	52,108	5,211	57,319	.....	.....
West South Central:					
Arkansas ²	47,646	4,765	52,411	.....	.....
Louisiana.....	44,569	4,457	49,026	(⁴)	(⁴)
Oklahoma.....	49,795	³ 4,980	54,775	⁴ 33,439	⁵ 61.0
Texas.....	112,443	11,244	123,687	52,038	42.1
Mountain:					
Montana.....	7,902	714	8,616	⁶ 6,124	⁶ 71.1
Idaho ²	8,288	829	9,117	.....	.....
Wyoming.....	3,165	317	3,482	(⁴)	(⁴)
Colorado.....	17,124	1,789	18,913	12,164	64.3
New Mexico.....	9,889	989	10,878	(⁴)	(⁴)
Arizona.....	5,116	⁶ 512	5,628	⁶ 3,451	⁶ 61.3
Utah.....	10,885	896	11,781	10,372	88.0
Nevada ²	1,360	136	1,496	.....	.....
Pacific:					
Washington.....	22,079	1,862	23,941	19,916	83.2
Oregon.....	12,389	1,239	13,628	9,176	67.3
California.....	40,336	3,720	44,056	32,138	72.9

¹ For those States which do not have adequate records of deaths the number of babies who died in the first year of life is estimated on the very conservative basis of 10 per cent of the population under one.

² Registration law passed since Jan. 1, 1910.

³ Inclusion or exclusion of stillbirths uncertain.

⁴ No figures available.

⁵ Includes stillbirths.

⁶ Returns for year ending June 30, 1911, rates based on a population (as of Jan. 1) of 210,194.

It must be borne in mind that this table is based on estimates,¹ and perhaps no better indication of the need of an accurate, uniform system could be made than that displayed by this table, which *seems* to show that Massachusetts has registered 105.7 per cent of her babies, while the secretary of the Commonwealth of Massachusetts, in his 1910 report on "Births, marriages, and deaths in Massachusetts," says:

Again, I wish to mention that the number of births reported in the State does not include all the births that take place, as a great many physicians neglect entirely to report the births at which they are present.

It may interest readers of this bulletin to make a personal inquiry as to the recording of their own births or those of their children. It is probable that a large proportion of parents will not find their own and their children's birthdays entered on the public records. The county clerk in many States is the official who keeps these records. The most effective law, as will be shown later, does not, according to experience, depend upon county clerks, but upon local registrars with small districts, where accuracy is secured by neighborhood knowledge.

METHODS OF SECURING BIRTH REGISTRATION.

A joint committee, on which are represented the American Medical Association, the American Public Health Association, the American Bar Association, the Bureau of the Census, and the Children's Bureau, has given this matter much study in the past 10 years and has drafted a model State law for the registration of births and deaths. Certain provisions of this law are so fundamental that it is extremely doubtful whether a State law not containing them can be successful—certainly those State laws which have proved most effective do include them.

This model law creates the office of a State registrar of vital statistics, under the State board of health, and upon this officer it places squarely the responsibility of securing registration of all births and deaths. The law divides the State into small primary registration districts. Each city, each incorporated town, and each township constitutes a separate registration district, and when these are too large to be covered conveniently by the local registrar, subregistrars may be appointed by the State board.

It provides compensation to local registrars at the rate of 25 cents for each birth or death certificate issued; and in case no birth or death occurs in a given month, 25 cents for a report of that fact.

¹ The estimate quoted—the number of infants under 1 year of age on a given date added to the number of infants who died in the same year—affords the only comprehensive basis upon which to compute the approximate number of births. It is generally recognized, however, that the census figure for the number of infants under 1 year on a given date is too small, owing to the tendency on the part of mothers to give a child's age as 1 year when the child has not yet completed 12 months of life. The census understatement results in an estimate smaller than the number of births which must have taken place and tends to make out a better case for the States than, with the present prevailing registration, is deserved.

The responsibility of reporting births to the registrar is placed upon the doctors and midwives or other persons in attendance at the birth. The law provides that they may be prosecuted for failing to perform this duty. The parents of every child should specifically ascertain that the birth of the infant has been duly registered.

It proves in practice impossible to secure satisfactory registration of births through the machinery of the county government. A county is too large an area to be covered by a single registration official. Too frequently the county officials are made a step between the local registrar and the State registrar, thus preventing the effective supervision of the whole work by the State official who is responsible for the efficiency of the entire system.

The superiority of the model law is not all that it has to commend it to us. It offers the way for uniformity among the States, and statistics collected under this law and tabulated by the United States Census Bureau will give us what we can secure in no other way. Copies of the law may be obtained upon application to the Census Bureau, and it is advisable, before introducing this bill in any legislature, that it be carefully redrafted by a competent lawyer and submitted to the Census Bureau for criticism.

The growing interest in birth registration is shown by the rapid advance made by the States in passing registration laws. In almost every State listed as needing amendment there is an active movement on foot to secure such changes, and with the public interest felt by groups of citizens and public authorities interested in baby-welfare work, compulsory education, and the abolition of child labor, it is safe to predict that not many years will elapse before the United States will have birth records which can be compared with those of other civilized nations.



U. S. DEPARTMENT OF LABOR
CHILDREN'S BUREAU

JULIA C. LATHROP, Chief

BABY-SAVING CAMPAIGNS

A PRELIMINARY REPORT ON WHAT
AMERICAN CITIES ARE DOING TO
PREVENT INFANT MORTALITY

INFANT MORTALITY SERIES, No. 1

Bureau Publication No. 3



WASHINGTON
GOVERNMENT PRINTING OFFICE

1913

LAW ESTABLISHING THE CHILDREN'S BUREAU.

AN ACT To establish in the Department of Commerce and Labor a bureau to be known as the Children's Bureau.

[62d Cong., 2d session. S. 252. Public, No. 116.]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established in the Department of Commerce and Labor a bureau to be known as the Children's Bureau.¹

SEC. 2. That the said bureau shall be under the direction of a chief, to be appointed by the President, by and with the advice and consent of the Senate, and who shall receive an annual compensation of five thousand dollars. The said bureau shall investigate and report to said department upon all matters pertaining to the welfare of children and child life among all classes of our people, and shall especially investigate the questions of infant mortality, the birth rate, orphanage, juvenile courts, desertion, dangerous occupations, accidents and diseases of children, employment, legislation affecting children in the several States and Territories. But no official, or agent, or representative of said bureau shall, over the objection of the head of the family, enter any house used exclusively as a family residence. The chief of said bureau may from time to time publish the results of these investigations in such manner and to such extent as may be prescribed by the Secretary of Commerce and Labor.

SEC. 3. That there shall be in said bureau, until otherwise provided for by law, an assistant chief, to be appointed by the Secretary of Commerce and Labor, who shall receive an annual compensation of two thousand four hundred dollars; one private secretary to the chief of the bureau, who shall receive an annual compensation of one thousand five hundred dollars; one statistical expert, at two thousand dollars; two clerks of class four; two clerks of class three; one clerk of class two; one clerk of class one; one clerk, at one thousand dollars; one copyist, at nine hundred dollars; one special agent, at one thousand four hundred dollars; one special agent, at one thousand two hundred dollars, and one messenger at eight hundred and forty dollars.

SEC. 4. That the Secretary of Commerce and Labor is hereby directed to furnish sufficient quarters for the work of this bureau at an annual rental not to exceed two thousand dollars.

SEC. 5. That this Act shall take effect and be in force from and after its passage.

Approved, April 9, 1912.

¹ Transferred from Department of Commerce and Labor to Department of Labor, upon the creation of the latter by act approved March 4, 1918.

CONTENTS.

	Page.
Letter of transmittal.....	5
Scope of the bulletin.....	7
City health officials' work in reducing death rate.....	7
Lack of adequate funds for carrying on work.....	9
Cooperation of health boards with benevolent agencies.....	11
Complete and prompt birth registration as a basis for effective work.....	13
Morbidity and mortality charts.....	14
Inspection of milk supply.....	15
Methods in different cities.....	15
Recognized grades of milk.....	18
Milk stations.....	20
Recent increase in number.....	20
Not a means of encouraging bottle feeding.....	22
Instruction of mothers a necessary feature.....	22
Equipment and management.....	23
Baby clinics.....	24
Operation in certain cities.....	26
Little Mother Leagues.....	30
Visiting nurses.....	32
Value of service in prenatal and postnatal work.....	32
Work in different cities.....	34
Prenatal work.....	38
Effect of housing conditions on infant mortality.....	41
Fight against flies, garbage accumulation, dust, etc.....	42
Stables and stable flies.....	42
Fresh-air camps and hospitals.....	43
Educational work through the distribution of circulars, pamphlets, etc.....	44
Conclusion.....	45
Appendix.....	47
How to Save the Babies (circular issued by the New York State Department of Health).....	47
Ten Reasons Why a Mother Should Nurse Her Baby (leaflet issued by the New York City Department of Health).....	54
Save the Babies (circular issued by the Pennsylvania Department of Health):	
English.....	55
Italian.....	58
German.....	62
Polish.....	65
Yiddish.....	69
Slovak.....	71
General Directions for Feeding Young Children (circular issued by the Providence, R. I., Health Department).....	74

Appendix—Continued.

	Page.
How to Take Care of Babies (published in French by the Providence, R. I., Health Department).....	76
Summer Care of Babies (circular issued by the Bridgeport, Conn., Department of Health):	
English.....	79
Yiddish.....	81
Slavish.....	83
Hungarian.....	85
Italian.....	87
Advice to Those About to Become Mothers (leaflet issued by the Providence, R. I., Health Department).....	90
To Expectant Mothers (leaflet issued by the Oregon State Department of Health).....	91

LETTER OF TRANSMITTAL

U. S. DEPARTMENT OF LABOR,

CHILDREN'S BUREAU,

Washington, D. C., June 16, 1913.

SIR: As a preliminary to more careful study of the work now carried on in various cities for the prevention of infant mortality, the following letter was sent to the mayors of the 109 cities of the United States having a population of 50,000 or more each:

DEAR SIR: We are much interested in ascertaining the prospects of baby-saving campaigns for the summer of 1913 in the principal cities of the country. May we ask you to give us information as to the organization of your department of health as especially related to the care of infants in summer? We should like especially to have any recent reports that you have made as to this service, and to know whether there is to be any enlargement of the service over last year; also what special features of your system you would recommend for general adoption.

In making this inquiry it was only anticipated that it would secure needed information for the office of this Bureau. The replies have shown that work of the utmost significance is going on in certain cities, while little or nothing is being done in others. In various instances city officials have shown much interest in such work and have made inquiries as to the best methods of initiating it.

In view of the interest shown and of the practical value of many of the replies received, the Bureau has summed up the information contained in them in the following statement as to the summer care of babies in certain American cities. The effort has been not to present in any respect an exhaustive report, but to show what is being done in various localities and the ways to go about such work. The appendix contains examples of circulars in various languages available for reproduction. It is intended to follow this preliminary statement by fuller bulletins, issued from time to time, showing the most advanced methods employed by various communities to safeguard the health of children, with especial reference to the growing work of rural health officers and rural nursing.

Special acknowledgment is made of the services of Mr. Ethelbert Stewart, statistical expert of this Bureau, in the preparation of the present pamphlet.

Very respectfully,

JULIA C. LATHROP, *Chief.*

HON. WILLIAM B. WILSON,

Secretary of Labor.

BABY-SAVING CAMPAIGNS.

SCOPE OF THE BULLETIN.

What the American cities are doing and can do toward preventing infant mortality and the too common high death rate of children under 5 years of age is to be the subject of an annual bulletin by the Children's Bureau. The present issue does not claim to be complete either as to the cities which are giving attention to such work or to the scope of their activities; it is merely a preliminary outline, introductory of what the Bureau hopes to accomplish in the way of acquainting cities with one another, when all cities have come habitually to report all such activities or lack of them to this Bureau.

Summer campaigns for babies' lives have been waged with such marvelously good effect in some cities, both in this and foreign countries, that it seems important to enlist the energies of as many cities in this work as possible. To this end it is most important that each city should know, in somewhat of detail, just what the other cities are doing. Information which represents a large expenditure of labor and which is invaluable as demonstrating comparative methods in different cities is tied up in reports of local health officials which have little or no circulation. To present, for the information and perhaps encouragement of all, the results of investigation as to the little or much that is being done by the various cities, whether directly or through municipal activity in conjunction or cooperation with private philanthropies, will be the purpose of this annual bulletin on summer campaigns for babies to be issued hereafter by this Bureau.

CITY HEALTH OFFICIALS' WORK IN REDUCING DEATH RATE.

The Special Public Health Commission of the State of New York, which was appointed by Gov. William Sulzer to collect facts, receive suggestions, and make recommendations as to changes in the public health laws and their administration, in its report to the governor, under date of February 19, 1913, makes clear the influence of city health officers in reducing the general death rate of cities within the last 10 years. It shows the mortality rate per 100,000 in cities of

the State, including villages of over 8,000 inhabitants, and the corresponding rate in rural districts and villages of fewer than 8,000 inhabitants. "It will be noted," says the report in discussing a chart in which the conditions are graphically shown, "that the urban death rate, beginning at 1,771 in 1902, falls to 1,466 in 1912. The rural and village death rate, beginning at 1,404 in 1902, has slowly risen, beginning to exceed the urban death rate in 1909, and since that date the divergence between the two in favor of the urban death rate has steadily increased." While, as Prof. Walter F. Willcox, of Cornell University, states, the somewhat more "complete registration of rural deaths in later years and the preponderance of population of the middle ages in cities, owing to immigration" may account for some of the sharpness of the contrast, nevertheless these considerations leave practically unaffected the general fact indicated by the figures, that the urban death rate is falling more rapidly than the rural and village death rate. That the attention given to such matters by local health officers, by private charitable societies, and by both in cooperation, has reduced the general death rate of cities below that of rural districts and villages is certainly a tribute to such efforts. It indicates clearly what can be done even with faulty organization and meager cooperation and emphasizes the importance of more extended and better organized means and method.

Discussing the reduction of death rates, the report referred to, after detailing the work against tuberculosis, says:¹

Next largest in the groups of deaths which are to a large extent preventable by known and practical methods, is infant mortality. The number of deaths from diarrhea and enteritis among those under 2 years of age in 1912 was 7,024.

Measures are being taken in a number of cities for reducing infant mortality. The first step in a comprehensive plan for the State as a whole is an adequate birth registration law, efficiently and uniformly enforced throughout the State. The enactment of such a law and the initial steps in its enforcement rest upon the State. With knowledge of the number of infants born and the localities and the causes of deaths, each village and city of considerable size should, when necessary, secure through its health department (a) the instruction of mothers during the prenatal period, (b) competent attendance at childbirth, (c) the encouragement of breast feeding, (d) medical supervision of the child at stated intervals, whether breast or bottle fed, and (e) pure, clean milk for infants for whom maternal nursing is impossible.

Each city with a population in excess of 10,000 and having an industrial population should have one infant-welfare station and larger cities with an industrial population should have one such station for approximately each 20,000 inhabitants.

There is no doubt that through effective action by the State in securing birth registration and in encouraging localities to undertake and effectively to prosecute such infant-welfare work, the number of deaths of children under 2 years could be enormously reduced in the immediate future.

¹ Gov. Sulzer's Message on Public Health with Report of Special Health Commission, transmitted to the legislature Feb. 19, 1913.

Among the specific recommendations made by the commission and approved by the governor in his message to the legislature are:

Each city, county, village, and town should be given specific authority to employ one or more trained nurses to act as infant-welfare nurses, school nurses, tuberculosis nurses, and generally at the request of physicians or health officers, to visit the sick who are unable otherwise to secure adequate care and to instruct other members of the households in the care of the sick. The State Public Health Council should establish qualifications of eligibility and conditions of appointment for such public-health nurses. In larger communities, when several nurses are employed, some would doubtless be assigned to one or the other of these duties, but in smaller localities all of them may be performed by one trained nurse. The advent of trained nursing marks not only a new era in the treatment of the sick, but a new era in public-health administration.

In the city of New York there are in the service of the department of health over 300 trained nurses in addition to those employed in hospitals for contagious diseases. Trained nurses are also employed by health authorities in some of the other cities of the State. Three counties and a considerable number of cities, villages, and voluntary committees employ tuberculosis nurses. An exceptionally interesting account was given to this commission of the work of district visiting nurses in the rural communities and villages of northern Westchester County. These nurses are in the employ of a benevolent corporation and are supported by private contributions, but in our judgment such nurses might equally well be employed elsewhere by local authorities. We strongly urge, therefore, that specific authority be given to each city, county, village, and town to employ one or more trained nurses for all the public-health purposes for which trained nursing has now been found to be practicable.

LACK OF ADEQUATE FUNDS FOR CARRYING ON WORK.

The principal impediment to efficient work in the health department of most cities is the lack of adequate funds either to pay a suitable salary to the health officer or to provide means for carrying on preventive measures intelligently. The New York commission recommended minimum salaries to health officers of towns and villages, equivalent to at least 15 cents per inhabitant of the village or town. This in addition to expense of carrying on the work.

As a general rule the most effective health service is not accomplished when the annual resources of the department, including salary of health officer, falls much below \$1 per capita of population. In cities of over 100,000, or when a great deal of work is done and the expense met by benevolent societies working in cooperation with the health department, this per capita is sometimes reduced without crippling the efficiency of the office.

That it is worth while to make some effort to arouse such an interest in saving infant lives as shall force appropriations in some degree commensurate with the work to be done is made evident by the following illustrations of the situation in two States, New York and Illinois—States in which certainly the poverty of the taxing bodies can not be pleaded in excuse for parsimony.

Dr. George Thomas Palmer, of Springfield, Ill., has collected reports from Illinois cities which show that in 44 cities and towns in Illinois having a population of 3,000 or over, and averaging about 16,500 for all, the average salary paid to health officers is \$300. Twelve cities, including one with a population of 30,000, another of 22,000, and one of 21,500, pay nothing. Twenty-one of the 44 cities and towns make no appropriation for expense beyond that covering the nominal salary of the health officer, if any.

His report is contained in a paper written by him, entitled "The Shortcomings of Municipal Public Health Administration," published in the American City for August, 1911. Some of the strongest paragraphs of the report are as follows:

* * * I have ascertained the facts in 44 Illinois cities of 3,000 population or over. * * * Of the 44 Illinois cities, we find that 6 have medical commissioners personally responsible for the work of their departments, and 15 have boards of health with medical officers. That is, 21 of the 44 cities have forms of health organization which may reasonably be presumed to afford efficient service. Of the others, 4 have headless boards of physicians in which no one is especially responsible; 1 has a board of physicians with layman health officer; 7 have boards of physicians and laymen with no health officer; 1 has a mixed board with layman health officer; 6 have boards of laymen with no medical guidance; and 3 intrust their health affairs to lay health officers without boards of any kind. One city of 26,000 employs merely a layman health officer, while a city of 22,000 has a board of laymen, the police matron acting as health officer when she is not otherwise engaged. While 15 of these cities exceed 20,000 in population and 3 are over 50,000, not one pays sufficient salary to warrant a competent man in devoting all of his time to the health department. One city of 59,000 pays \$1,500 per year, the highest salary paid to any municipal health officer in Illinois outside Chicago; a city of 70,000 pays \$1,200, and one of 51,000 pays \$1,000. Three of the 44 cities pay \$900 per annum, 1 pays \$800 per annum, 5 pay \$600, 2 pay \$400, 2 pay \$300, 7 pay \$200, 1 pays \$150, 1 pays \$100, 1 pays \$75, 4 pay \$50, 2 pay \$25, and 12 pay nothing at all for public-health supervision. The average population of the 44 cities is about 16,500; the average salary paid to health officers is \$300. The 12 cities paying nothing, including one of 30,000, one of 22,000, and one of 21,500, should expect nothing in the way of protection of the lives and health of their people. A city of 30,000 which pays \$400 per year for its health officer could not expect to receive the services of a competent man for more than one-sixth of his time, while a city of 25,000 paying \$200 per year could not ask a well-qualified officer to devote a full hour a day to its public-health affairs. I make this estimate on the assumption that a competent health officer could be secured to devote all his time to the office for \$2,400 per year, and it was this assumption I had in mind when I stated that, in my opinion, every growing city of 20,000 or over should employ a competent man constantly in its protective and constructive public-health work.

* * * It may be noted that 36 of the 44 Illinois cities pay less than unskilled workman's wages to their health officers. Applying our third standard of preparedness and efficiency—specific appropriation for public-health purposes—we find that 21 of the 44 Illinois cities have no appropriation, or only that for the payment of the nominal salaries of board members and health

officer. In some of the appropriations given the cost of garbage disposal is included, making the showing, so far as public-health purposes are concerned, far too high. We note, however, that two cities of over 20,000 propose to give adequate public-health protection at a cost of \$300 per year, while one city has no appropriation.

* * * Of the 44 cities, 29 employ no inspectors; among these one of over 20,000 pays nothing for its health officer, and another of 10,000 pays its health officer \$25 per annum.

The New York situation is described by the Special Health Commission thus:¹

There is the widest diversity as to the compensation of town and village health officers, except that in nearly every case it is inadequate and in many cases ridiculous. In some cases there is a salary, in other cases fees, in some cases both, and in a few cases no compensation at all. The average annual compensation including fees and salaries of health officers of the 771 towns and villages represented by the 652 health officers replying to our letter of inquiry (652 of a total of 1,032) was \$60.84. The amounts received range from \$3 to \$1,400. Their average annual compensation (some serving more than one town or village) is \$71.96.

There is no reason to believe that New York and Illinois are different from other States in this regard. A letter from the clerk of the board of health in a city of 687,029 population to this Bureau, dated February 20, 1913, says: "I have to advise that the health department has no funds available for organizing a division for the care of infants." Another health officer of a city of over 168,000, replying to the Bureau's letter asking what plans were being considered for a summer campaign against infant mortality, said: "We have been unable to get an appropriation from the city council for carrying on a campaign of this kind."

When the truth of the motto of the New York City Health Department—"Public health is purchasable; within natural limitations a community can determine its own death rate"—is generally recognized, it is certain that civic appropriations will become adequate.

COOPERATION OF HEALTH BOARDS WITH PRIVATE BENEVOLENT AGENCIES.

In view of this wide-spread, if not general, lack of appropriation to enable health boards to deal with the situation, direct cooperation with private benevolent societies has suggested itself and has been acted upon with excellent results in many places. Dr. Selskar M. Gunn, when health officer of Orange, N. J., said:

The campaigns against infant mortality in the past have been conducted for the most part in large cities, and this is quite natural, as in the large city the necessity for work in this direction is more evident than in the smaller community, but I venture to state that in some of our smaller cities the condi-

¹ Gov. Sulzer's Message on Public Health, with Report of Special Public Health Commission, transmitted to the legislature Feb. 19, 1913.

tions are almost as serious as in the larger places. * * * The methods of approaching and attacking these problems are varied and many. One of the first things to be done is for the board of health to establish, if it has neglected to do so, good relationships with the various civic organizations that are present in the community. I refer particularly to the bureau of associated charities, day nurseries, diet kitchens, visiting nursing settlements, and organizations of similar character that are working for the good of the community. This is very essential in small cities where the board of health does not receive adequate financial support from the city fathers, a condition usually to be met. These societies can be of very material help in supplying the necessary weapons for the attack. Such cooperation will be found particularly useful in all branches of public-health work. * * * Many of these organizations are not doing the effective work they are capable of because they are not in a position to discover the cases which they really should be assisting. They have oftentimes to take the cases as they come, irrespective of the real need, and so many who most need help are never reached. All of this emphasizes the important fact that in small cities the health department should cooperate in every way possible with all the private social agencies that are at work in the city. These agencies are not infrequently doing work which probably should be done by the health department, but which, through the parsimony or false economy of the city fathers, can not be undertaken at the present time. * * * Milk depots are examples of this.¹

When, as is sometimes the case, no private agencies exist with which to cooperate, the health officer often resorts to agitation to bring them into existence. This is done by using the local press to call attention to the infant mortality of the place, emphasizing the number of preventable deaths each week from causes so largely social in their nature that the individual parents can not be considered wholly to blame. In thus showing the need of private philanthropies, directed toward the causes of preventable infant mortality, the health officer has recourse to his wall charts. In Utica, N. Y., a fusillade of newspaper paragraphs calling attention to the fact that the infant death rate of that city exceeded that of any other city of its size in the State except two, one of which was exceptional because of its hospital population, finally brought into existence the Utica Babies' Pure Milk and Health Station Association, which most effectively entered the campaign against preventable infant mortality in 1912.

The health officer can, more effectively than anyone else, call public attention to the fact that: "The reduction of infant mortality is a public-health problem. The basis of responsibility lies with the public which must voice its decision through its mouthpiece, the government."² In the event of local government neglecting or refusing, private philanthropies must step in.

When cooperation is offered with a view to directing and thus minimizing wasted effort, it is usually accepted in good spirit. The

¹ Dr. Selskar M. Gunn, *Modern Methods of Health Boards in Small Cities*, Journal of American Public Health Association, May, 1911.

² "The Principles of the Reduction of Infant Mortality," by Josephine Baker, M. D., New York Medical Journal of Nov. 25, 1911.

excellent work being done in Atlanta, Ga., with the exception of milk inspection, is private work with municipal cooperation; this is also true in Baltimore, Md.; Columbus, Ohio; Erie, Pa.; Indianapolis, Ind.; Jacksonville, Fla.; Newark, N. J.; Washington, D. C.; and many other cities. Probably the most conspicuous examples of successful cooperation are those of the New York City Health Department with the New York Milk Committee and Cleveland, Ohio, with the Babies' Dispensary and Hospital. In the report of the latter institution for the year ending September 13, 1912, Dr. H. J. Gerstenberger writes:

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The success in the reduction of infant mortality in any community depends principally upon the following factors: First, the full recognition of the various causes of infant mortality and their relative importance; second, the knowledge of the means to remedy these causes and, better still, to prevent them, and the application of these means; third, the education of the future parents, physicians, and nurses; and fourth, the degree of unity in plans for action existing among the various private philanthropies and departments of the municipality and State that are more or less directly interested in this subject.

The outcome of successful private work through the cooperation of city health officers is usually to cause the city councils to appropriate sufficient funds to allow the municipality to take over this work, gradually sometimes, but eventually completely. This has been the experience, for instance, in Bridgeport, Conn., where a private visiting nurses' association established a milk station, demonstrating its value to the city, which established two in 1912, providing a nurse in connection with them. The Milwaukee division of child welfare in the Municipal Health Department is an outgrowth of a child-welfare campaign conducted by a commission. This extension of municipal control of preventive work through cooperation with private associations is being experienced in Reading, Pa.; Holyoke, Mass.; Indianapolis, Ind.; Philadelphia, Pa.; Boston, Mass.; Richmond, Va.; Jacksonville, Fla.; and many other places. The health officer of Jacksonville, Fla., writes:

We have organized an Infant Welfare Association and are at the present time preparing to employ a nurse who shall devote her whole time to that work. She will be under the direction of the welfare association and in constant touch with this department, from which she will probably receive the largest portion of her calls.

COMPLETE AND PROMPT BIRTH REGISTRATION AS A BASIS FOR EFFECTIVE WORK.

The plan adopted in some cities toward a summer campaign is to arrange for a complete and quick registration of births; to get the baby under observation as quickly as possible.¹ Even where State

laws permit much longer time in which to report births, some city health officers have made arrangements with physicians and midwives to give immediate notification of births during the summer months. Lists of all physicians and midwives are presumably kept complete at all times, and calling these groups together—separately of course—and having frequent conferences with them is suggested as a great aid in securing speedy notification of births. Sending each mother immediately a card or letter stating that the health office has been apprised of the birth of her child, as is done in Kansas City and other places, has been found to be an effectual means of securing the interest of the mother and of spreading sentiment in favor of complete registration. Upon receipt of a card or letter the mother will comment upon it to other mothers. The mother who has not received such a letter will at once want to know of her physician or midwife why her baby was not registered and why she did not get a notice of it. Inclosed with this card or letter to the mother many cities send a folder containing advice to mothers on the care of babies. The health bureau thus gets in with its advice ahead of the neighbors. The folders carry, of course, a strong appeal for breast feeding and give instructions for the care of the breasts and for feeding in case breast feeding is impossible.

MORBIDITY AND MORTALITY CHARTS.

The health officer should be the guiding hand in these private activities; he has but to call attention to his morbidity and mortality charts upon which, with various colored pins, he shows exactly where the high death rate is coming from and the causes producing it. These wall charts are city ward maps upon which blocks and, if possible, lots and buildings are indicated. A colored pin is stuck into the map at the proper place for each reported death and for each reportable disease return. By means of these pins of various colors the relative health conditions of the different localities can be shown and the health officer can point out the high death-rate districts, and can show the causes which have produced this death rate. As Mr. Sherman C. Kingsley, when superintendent of the United Charities of Chicago, said: "Where the white hearse goes most often there you will find the weakest place in your municipal housekeeping." The health officer, from the pins upon his wall chart, can follow the route of the bad-milk man and can prophesy very accurately where

¹ The work in Detroit, Mich., is thus described by the health officer: "As to some special features in connection with this work would say that we are looking after the midwives, boarding out of babies, maternity homes, watching the birth certificates very closely, seeing about getting proper registration of births, keeping close watch of the death rates, making maps showing where the babies die, in order to direct our work to these locations this coming summer."

the white hearse will go. Summer diarrhea and enteritis in children under 2 years is, wherever possible, made a reportable disease during the hot months, and reported morbidity from this cause is indicated on the wall map. A separate map is frequently used for children's diseases. Better results in locating bad-milk routes are obtained from studying these morbidity returns than from merely following mortality returns.

Cooperation with private benevolent societies makes itself most felt and is most effective when such societies have immediate notification of births and of morbidity returns. The best results have been obtained where there is no waiting for the official formalities; when birth notifications, reports of sick babies, and infant death returns are immediately telephoned to the private society.

INSPECTION OF MILK SUPPLY.

A rigid inspection of the milk supply is strictly the province of the municipality, and usually the summer campaign against infant mortality begins, as in Atlanta, Ga., with a "more rigid inspection of the milk and dairies during the summer."

Lists of every milk producer furnishing milk to the city and every dealer in the city, whether from wagon or from store, usually kept complete at all times, is made subject to vigorous revision, even where license is not necessary, and frequent samples from all dealers are thoroughly tested, not only for fat but for dirt and bacteria. A number of cities that get no further in the way of summer baby saving make a complete inspection of dairies and the milk supply during the hot months. The importance of milk control in summer months can not be overestimated. Health officers are practically as one in the opinion that unclean milk, or the improper preparation and care of milk in the home, is responsible for a large share of the increase in infant death rate that comes with the heated season. It is the city's duty to see that the people can buy clean milk; it is the parent's duty to see that the milk is kept clean. The wall charts above referred to enable the health officer to locate the bad districts—to get a geography, as it were, of the death rate.

METHODS IN DIFFERENT CITIES.

That the example of Atlanta, Ga., in beginning the summer with more rigid inspection of the milk and dairies is followed by many cities, the following extracts from letters to this Bureau will attest:

New Haven, Conn.—We give more close attention to dairy and farm inspections and make a larger number of examinations of milk.

Salt Lake City, Utah.—We have a very good milk ordinance which is rigidly enforced and has a tendency to reduce infant mortality.

Springfield, Ill.—The Department of Health has done nothing toward the prevention of infant mortality, except very careful inspection and reinspection of dairies for an area of 15 miles about the city.

Seattle, Wash.—In all our milk work we have endeavored to raise the standard of milk production along lines somewhat original. We have first sought to make the business profitable by endeavoring, so far as possible, to educate the dairyman how to produce the best stock, how to feed the same, and in general make the occupation of dairying profitable. We have done this primarily so that we might have steady shippers. There is no branch of milk production comparable with this in my judgment. A city must strive to maintain a shipment of milk from dairymen who are well acquainted with the laws and ordinances, who on account of experience can produce milk under the terms of our ordinances. If a city has a number of dairymen changing from one vocation to another, such a milk supply can never be first class.

Schenectady, N. Y.—During the past year we have made radical changes in our milk-inspection work. July 1, 1912, we adopted a new set of rules governing the production, sale, and care of milk in the city of Schenectady, after having studied the milk question thoroughly. At present we are contemplating several further changes, and we hope to get an ordinance which will prohibit milk being dipped on the streets and of enforcing the sale of bottled milk only. In fact, we are trying to get our milk-inspection system as near the ideal as possible. When all is said, perhaps the most important factor of a baby-saving campaign is pure milk.

To trace the cases of intestinal diseases from the cow or the dairy farm to the nursing bottle of the infected child, just as was done in the case of diphtheria in the towns of Dorchester, Milton, and Hyde Park, Mass., is a very effective and conclusive method of securing ordinances which permit either the establishment of municipal milk supply or complete control of private sources.¹

Cartoons descriptive of well-known local conditions are always good to emphasize local needs. The Chicago Health Department very effectively illustrates the superiority of breast feeding by a cartoon which it calls "The Long and Short Haul," which is reproduced on the opposite page. Local illustrations along similar lines have been made very effective elsewhere.

The larger cities, such as New York, Chicago, Boston, Philadelphia, and particularly Washington, D. C., have made every effort to control the milk supply from its source.

The following quotation from "The Milk Question," by M. J. Rosenau, gives some idea of the problem involved in a survey of the milk supply for large cities:

The extent to which this separation of consumer and producer has taken place in the milk industry is patent when we recall that Boston gets most of its milk supply outside of a 50-mile circle, and some milk starts 243 miles from the city. New York receives practically no milk within 50 miles, and

¹ See Monthly Bulletin of the State Board of Health, Mass., May, 1907, Vol. II, No. 5, p. 117; also Bulletin 56 of the Hygienic Laboratory, U. S. Public Health Service, entitled "Milk and its Relation to the Public Health," p. 36.

some of its supply comes from points as far away as 400 miles. New York City uses about 1,600,000 quarts of milk a day, derived from 40,000 dairy farms.

Most of the milk supply of Chicago is produced within 60 miles of the city. A 100-mile circle about the city would include nearly all the dairies producing its supply. In times of exceptional scarcity in summer sweet cream is shipped 200 miles. The production of Chicago's milk within such a short distance of the city is in marked contrast with conditions in Boston and New York. Chicago uses about 1,000,000 quarts of milk a day. The health commissioner estimates that, in 1910, 120,000 milch cows were necessary to furnish the city supply, making an average production of 6.3 quarts per day per cow.

The District of Columbia consumes about 76,000 quarts of milk a day, or about 0.4 of a pint per capita. This milk is produced on 1,091 dairy farms from 17,688 cows. About one-third is brought in by wagons and two-thirds by steam and electric railroads. The cream is largely received from Philadelphia and New York.

Smaller cities or cities situated in the center of rural districts do not, of course, have a problem so serious as this. Nevertheless, the survey and control of the milk supply is not the province of private philanthropies and should not be expected of them.¹

RECOGNIZED GRADES OF MILK.

Beyond milk inspection and survey of the milk supply, the next step is the establishment of milk depots to furnish pure milk for babies who for any reason can not be breast fed. The health department usually examines and certifies the character of the milk. The milk is usually graded in three classes: (1) Certified milk, (2) inspected milk, and (3) pasteurized milk, and these classifications are embodied in the laws or the regulations and enforced by public-health authorities.

The following definitions or specifications for the grades of milk named are taken from a paper on "The Classification of Market Milk," by Dr. A. D. Melvin, chief of the Bureau of Animal Industry, United States Department of Agriculture, published in Hygienic

¹ There are, of course, numerous private publications on methods of dairy and milk inspection. Health officers will, however, find most concise and helpful "Twenty Dairy Suggestions with Special Reference to Sanitation," a stable placard obtainable from the Bureau of Animal Industry, United States Department of Agriculture. In "Municipal Ordinances, Rules, and Regulations Pertaining to Public Hygiene," reprint from Public Health Reports, No. 70, of the U. S. Public Health Service, Washington, 1912, will be found ordinances and regulations from a large number of cities (pp. 70-150), from which a satisfactory ordinance could be selected or drafted to suit any locality. The city ordinance of Berkeley, Cal., contains a score card used in grading dairies. Other reports published by the U. S. Public Health Service which health officers will find extremely useful are "Milk and Its Relation to Public Health," issued as Hygienic Laboratory Bulletin No. 56, second edition, 1912, and "Methods and Standards for the Production and Distribution of 'Certified Milk,'" reprint from Public Health Reports, No. 85, 1912. The Bureau of Animal Industry is sometimes able to help raise the standard of local conditions, by sending, upon request of a city or State health officer, an expert to assist in making a survey of the milk and milk supply.

Laboratory Bull. No. 56, second edition, 1912, entitled "Milk and Its Relation to the Public Health," pp. 608-610:

Class 1: Certified milk.—The use of this term should be limited to milk produced at dairies subjected to periodic inspection and the products of which are subjected to frequent analyses. The cows producing such milk must be properly fed and watered, free from tuberculosis, as shown by the tuberculin test and physical examination by a qualified veterinarian, and free from all other communicable diseases, and from all diseases and conditions whatsoever likely to deteriorate the milk. They must be housed in clean and properly ventilated stables of sanitary construction and must be kept clean. All persons who come in contact with the milk must exercise scrupulous cleanliness and must not harbor the germs of typhoid fever, tuberculosis, diphtheria, or other infections liable to be conveyed by the milk. Milk must be drawn under all precautions necessary to avoid infection and be immediately strained and cooled, packed in sterilized bottles, and kept at a temperature not exceeding 50° F. until delivered to the consumer. Pure water, as determined by chemical and bacteriological examination, is to be provided for use throughout the dairy farm and dairy. Certified milk should not contain more than 10,000 bacteria per cubic centimeter, and should not be more than 12 hours old when delivered. Such milk should be certified by public health officers or by some other properly constituted authority.

Class 2: Inspected milk.—This term should be limited to clean raw milk from healthy cows, as determined by the tuberculin test and physical examination by a qualified veterinarian. The cows are to be fed, watered, housed, and milked under good conditions, but not necessarily equal to the conditions prescribed for class 1. All persons who come in contact with the milk must exercise scrupulous cleanliness and must not harbor the germs of typhoid fever, tuberculosis, diphtheria, or other infections liable to be conveyed by the milk. This milk is to be delivered in sterilized containers and is to be kept at a temperature not exceeding 50° F. until it reaches the consumer. It should contain not more than 100,000 bacteria per cubic centimeter.

Class 3: Pasteurized milk.—Milk from dairies which do not comply with the requirements specified for classes 1 and 2 should be pasteurized before being sold, and should be sold under the designation "pasteurized milk." Milk for pasteurization should be kept at all times at a temperature not exceeding 60° F. while in transit from the dairy farm to the pasteurizing plant, and milk after pasteurization should be placed in sterilized containers and delivered to the consumer at a temperature not exceeding 50° F.

All milk of unknown origin should be placed in class 3 and subjected to clarification and pasteurization. No cow in any way unfit for the production of milk for use by man, as determined upon physical examination by an authorized veterinarian, and no cow suffering from a communicable disease should be permitted to remain on any dairy farm on which milk of class 3 is produced, except that cows which upon physical examination do not show physical signs of tuberculosis may be included in dairy herds supplying milk of this class.

This milk is to be clarified and pasteurized at central pasteurizing plants, which should be under the personal supervision of an officer or officers of the health department. These pasteurizing plants may be provided either by private enterprise or by the municipality, and should be located within the city.

By the term "pasteurization," as used herein, is meant the heating of milk to a temperature of 150° F. or 65° C. for 20 minutes, or 160° F. or 70° C. for 10

minutes, as soon as practicable after milking, in inclosed vessels preferably the final containers, and after such heating immediate cooling to a temperature not exceeding 50° F. or 10° C.

Other conditions.—No milk should be regarded as pure and wholesome which, after standing for two hours or less, reveals a visible sediment at the bottom of the bottle.

No dairy farm should be permitted to supply milk of a higher class than that for which its permit has been issued, and each dairy farm supplying milk of a specified class should be separate and distinct from any dairy farm of a different class. The same owner, however, may supply different classes of milk, providing the dairy farms are separate and distinct.

The term "milk" as herein used includes cream.

The New York City Board of Health adopted the following resolutions in regard to the sale of "loose" or "dipped" milk, on September 17, 1912, effective on June 1, 1913:

Whereas the interest of the public health requires that milk should be protected from contamination by human agencies and by dust, dirt, and flies; and,

Whereas many of the premises in the city of New York where milk is sold by dipping from cans are grocery stores in which foods and food products and other commodities not in sealed packages are sold in a manner which causes much dust; and,

Whereas the facilities for proper icing, the proper cleansing of utensils, and the proper protection from flies are often inadequate in such stores, many of which are so arranged that the living rooms open directly into the store: Therefore be it

Resolved, That after June 1, 1913, the sale of milk dipped from cans will be permitted only in milk stores approved by this department, and for which a permit has been issued, or in places in which foodstuffs, other than milk products, are sold in original packages only.

MILK STATIONS.

RECENT INCREASE IN NUMBER.

A constantly increasing number of cities of all sizes are establishing milk stations and dispensing milk, whether pure whole milk, certified, modified, pasteurized, or sterilized milk, to mothers of babies that must be bottle fed. The U. S. Public Health Service, published a compilation¹ from schedules received by that Service from certain cities in which such work is being carried on. The report covers 43 institutions located in 30 cities of over 50,000. These cities are Albany, Baltimore, Boston, Buffalo, Chicago, Dayton, Detroit, Hartford, Honolulu, Indianapolis, Kansas City, Mo., Lawrence, Louisville, Lowell, Milwaukee, Newark, New Bedford, New Haven, New York City, Peoria, Pittsburgh, Providence, Rochester, St. Louis, Springfield, Ohio, Washington, D. C., Waterbury, Wilkes-Barre, Worcester, Yonkers.

¹ "Data Regarding the Operation of the Infants' Milk Depots in the United States." Reprints from Public Health Reports No. 64, U. S. Public Health Service.

Twenty-nine of the institutions are maintained by private benevolence; 11 did not report on this point; while one was reported as maintained partly by private means and partly by public appropriation.

Forty-three of the institutions mentioned distribute milk, 23 of them to infants only, and 20 to both infants and adults. At some depots the milk supplied is for expectant or nursing mothers, thus contributing indirectly to the welfare of the children.

Of the 36 institutions furnishing information as to the average age of the children fed, in the majority the children are under 1 year of age, and in practically all they are under 3 years.

At 30 of the institutions reporting, literature on infant hygiene is distributed with the milk; one of the circulars is issued in seven languages. Twelve institutions distribute no literature, and one institution distributes practically none.

Every institution which reported except one takes special measures for the education of mothers in infant hygiene. These instructions are given by physicians and nurses or by means of literature or by both. In 2 cases the educational work was carried on in the homes; in 2 only at central stations; in 38 both in the homes and at central consultations.

The letters received by the Children's Bureau indicate a number of cities of the class named having milk stations in 1912, or intending to establish them in 1913, not in this tabulation. Salem, Mass., for instance, has conducted a certified milk station for four summers and continues it for 1913. During the 60 days of 1912 in which it was operated, 35,863 feedings were dispensed to an average of 66 cases per day. Of course, a large number of cities under 50,000, and many, like Montclair, N. J., under the 25,000 class, have excellent milk stations and are doing splendid work along many child-saving lines. It is the intention of this Bureau to obtain, so far as possible, complete returns from all cities and towns having more than 15,000 inhabitants and to present the result of the investigation in tabular form in next year's bulletin.

The magnitude of the movement in New York City is shown in the report on "Milk Stations" issued by the Clean Milk Association. In nothing is the importance of cooperation between the municipal health office and private philanthropies and civic associations so apparent as in this matter of summer milk supply. Where municipal milk stations and municipal milk supply are impossible it is nevertheless usually possible to organize a local charity that will supply the needed funds for a sufficient number of pure-milk stations. The experience of Utica, N. Y., previously referred to in this report, could no doubt be duplicated in scores of cities from which reports have not yet been received. The frequent and persistent publication of the

local infant death rate and its relation to the nature of the milk supply will sooner or later arouse sufficient public interest in any locality to insure to the health office sufficient funds and cooperation to apply the remedy.

NOT A MEANS OF ENCOURAGING BOTTLE FEEDING.

Usually the first step taken toward a summer campaign for saving babies' lives, whether by a municipal health department or by private benevolence, is to establish a pure-milk station. Since the largest part of the summer infant mortality comes from bottle-fed babies and is traceable to dirty milk, the pure-milk station suggests itself as the most obvious and direct remedy. From a number of sources, however, comes a warning that the pure-milk station as a separate institution must not be too much accentuated. The danger comes from the fact that it deals only with bottle-fed babies. Since a bottle-fed baby has only one-tenth the chance to live that a breast-fed baby has, it is perfectly natural that preventive efforts should first be directed toward the most potent causes of high death rate, but there may be and in some places there have been certain attending dangers where the furnishing of milk has been the only thing attempted. On this account in many, if not most, milk stations positive proof is required that the mother either can not or ought not to nurse her baby before she can get the pure milk, and this precaution has been found necessary in order to prevent an increase in bottle feeding in the community as a result of the feeling of greater safety which the pure-milk station gives to mothers who, while perfectly able to nurse their children, would prefer, for insufficient reasons, not to do so. It is never intended that there should be less insistence upon the duty of breast feeding because of the milk station, for while the death rate among the bottle fed is reduced by pure milk, the death rate among the bottle fed from the purest milk possible is still much higher than the death rate among the breast fed, and if there is any perceptible increase in bottle feeding as against breast feeding because of the milk station the latter might thus become an agency to increase rather than decrease infant mortality.

INSTRUCTION OF MOTHERS A NECESSARY FEATURE.

It has been the experience of practically all milk dispensaries that it is useless to send pure, clean milk into a dirty home to be handled by an ignorant, dirty mother or older child. It is necessary to reach the mothers, and not only to teach them how to care for the baby's milk, but to convince them of the necessity of cleanliness where the baby's food is concerned—convince them of the deadliness of dirt, especially of dirty milk.

In many cities it is believed that the principal good to be derived from milk stations consists in the opportunity given for those in charge to come in contact with the mothers and with the home surroundings of the babies in the high death-rate districts. The nurse and the physician in consultation with the mother thus become a necessary adjunct of the milk station. No milk, however pure or clean, agrees at all times with all babies, and the distribution of modified milk become necessary almost immediately in a number of cases. To modify the milk to serve the needs of a given child that child's case must be studied; hence the child clinic, which almost at once grows out of the necessities of the milk station.

EQUIPMENT AND MANAGEMENT.

A milk station is simply a room from which pure milk is given out for the use of babies that can not be breast fed. The best location is in or as near as possible to the congested part of the city. It is only necessary that the room shall be sufficiently large to accommodate the patrons and the equipment and that it be light and clean. In the case of Utica, N. Y., for instance, the first milk station was opened in a schoolhouse, and it would seem that schoolrooms, thoroughly scrubbed and cleaned, might more generally be turned into this use during the summer vacation. The equipment is simple: A good ice box, large, and kept clean, a desk, some chairs, and a table. The walls and wood-work are usually painted white, and the floor is covered with linoleum, which makes easier the task of keeping it clean.

Signs in large letters and in all needed languages are usually put up, stating that pure milk is furnished at the lowest possible price (sometimes free to the poor), for the use of babies only. Most cities find it better to sell the milk at practically the ordinary price at which milk is sold in the city. This avoids conflict with the dairy interests, and allays the suspicions of the ignorant, that the pure-milk station is but a scheme to get higher prices. The following from the report for 1910 of the Babies' Milk Fund Association, of Louisville, Ky., is illustrative of the practices and experiences of all:

At each of the seven stations certified milk was sold below cost for the children of the poor. The regular retail price of certified milk, 12½ cents a quart, being prohibitive in our station neighborhoods, we made our price at first 8 cents a quart, meeting exactly the price of the ordinary market milk our patrons had been accustomed to buy, and raising our price to 9 cents later, when market milk was advanced to that price by the retail dealers throughout the city.

We paid 10 cents a quart for this certified milk, and so we lost at first 2 cents, later 1 cent, on every quart sold.

The modified milk, which costs the association about 17 cents a day for each baby, was sold for 10 cents a day.

While payment of our low charges was exacted of all families able to pay, the milk was furnished entirely free of cost to those unable to pay, and to some others at half price, when the applicants were recommended after careful investigation by the Associated Charities or the Federation of Jewish Charities.

BABY CLINICS.

It has been found generally advisable to put the milk station in charge of a competent nurse, who is on duty at the station during stated hours of the day to distribute the milk. In many cases she finds it imperative to give mothers instructions in the care of the milk in the home—for pure milk will not stay pure in a dirty home if it is exposed—and as well to teach them how to take care of their babies. Thus, the milk station unavoidably and inevitably becomes a “consultation,” like the French institution of the same type. A consulting nurse is the first feature; later, in most cases, “modified milk” is added to the pure milk supply; with modified milk comes the frequent necessity of bringing certain babies to the station to be examined by a physician for the purpose of determining just how the milk should be modified to meet the case. And thus begins the “baby clinic,” all as the inevitable outgrowth of the milk station. At first, milk modifications proceed along the line of a few formulæ, and graded by numbers this milk is furnished according to the age or apparent condition of the child. The tendency here, of course, is to diagnose the child to fit the milk, as Dr. Newmayer says: “Modified-milk stations with set formulæ Nos. 1, 2, 3, try to make the baby fit the milk modifications instead of the milk to fit the baby.” But this does not usually last long and seldom becomes serious. The baby clinic soon becomes a recognized necessity of the modified-milk dispensary, and out of this grows the visiting-nurse system, since the nurse must go to the mother’s house and teach her how to modify the milk for her particular baby according to the prescription given by the physician at the clinic.

Although the methods employed in the conduct of infants’ milk depots have varied somewhat both in this country and abroad, their objects have been the same. It is recognized that all milk dispensed should be produced and transported under conditions insuring a product of the highest purity, that it should be prepared and modified in the depot under medical supervision, and that strict bacteriological precautions should be taken in every step of the process.

In addition to the care exercised in the depot, the milk is packed in a manner to guard against contamination in the home. Each bottle contains but one feeding, and is so designed that it will not stand on end, and therefore can not be left standing open.

The milk is modified in accordance with standard formulæ in use at the various depots, and, in addition, special modifications are made upon the prescriptions of physicians.

The following are formulæ now in use at the Straus milk depots in New York:

Formulæ for modified milks.

Formula No. 1 (Dr. Arthur R. Green) :		Ounces.
Milk		96
Cane sugar		2.5
Salt .....		.083
Oat water		32
Formula No. 2 (Dr. Rowland G. Freeman) :		
Milk		64
Limewater		4
Milk sugar		6
Filtered water		60
Formula No. 3 (Dr. A. Jacobi) :		
Milk		64
Barley water		64
Cane sugar		4
Table salt		¹ 30
Formula No. 4 (Dr. Rowland G. Freeman) :		
Cream (16 per cent)		10½
Milk		21½
Milk sugar		6½
Limewater		4
Filtered water		92
Formula No. 5 (Dr. Arthur R. Green) :		
Cream (16 per cent)		4
Milk		16
Limewater		6
Milk sugar		6
Filtered water		102

The three former mixtures are placed in 6-ounce bottles, the two latter in 3-ounce bottles and pasteurized by exposure of 20 minutes to 157° F. Whole milk is also pasteurized in 8 and 16 ounce bottles.

Practically all infants' milk depots in the United States are under general medical supervision, and, in addition, many depots are in direct charge of graduate nurses who prepare the milk and give instructions to mothers in the care of infants. In some instances, visiting nurses also enter the homes of the children for the purpose of imparting instruction.

It frequently happens that several physicians will volunteer to give a few hours each week to the baby clinics, and when this is done the clinics are held at the milk station, at stated hours, either daily or on certain days, the hours being made to conform to the proffered services of physicians. The baby clinic necessarily develops into a mothers' "consultation" and these usually lead to the public

lectures to mothers which, although held in connection with the general organization controlling the milk stations, are themselves given in a church or a schoolroom. The natural growth of the work and methods is perhaps best seen by the following description of developments in the case of a few typical cities, such as Indianapolis, New York, and Philadelphia:

OPERATION IN CERTAIN CITIES.

Campaign in Indianapolis.—An interesting letter, accompanied by a report on the work of the stations comes from Indianapolis. Dr. H. G. Morgan, health officer, writes: "The Indianapolis City Board of Health is working in conjunction with the Children's Aid Association in the care of infants in summer. If there is any one feature of the work I would especially recommend, it would be an increase in the number of nurses." The report of the association follows:

The pure-milk stations of the Children's Aid Association were open and in operation daily during the year 1912. The most important feature of this department is the educational work of trained, graduate nurses. In the early part of the year we had two such nurses, in May there were three, through the summer there were five, and then in the fall the number began to be decreased until in December we had only one. These nurses made during the year 4,929 professional visits to the homes of babies, besides attending clinics and helping many babies in other ways outside of their homes.

Where special modifications were prescribed by the physicians, either private or as members of the medical staff, the nurses visited the homes and showed the mothers how to prepare the milk according to directions. More complex modifications for very sick babies were made by the nurse at the central station and distributed through the regular distributing stations.

Nursing or prospective mothers were registered in some cases, to the number of 63, and received the same personal attention of the nurse, if required, as did the babies.

Most of the clinics of the year were held at the central station in the Baldwin Block. Some, however, were held at the branch distributing stations as occasion required. During the lighter seasons of work two clinics a week were held, but in the summer clinics were held daily except Sundays and holidays. These clinics were in charge of physicians, one or two being present each day. In all 210 clinics were held and 882 children examined.

The milk for children who required special feeding was distributed through milk stations, of which during the summer there were five. Two others were open for a short period, but were discontinued on account of the expense in reaching them in proportion to the number of children obtaining milk there. At each of these stations a woman was employed at a small monthly fee to distribute milk, check up the return of bottles, a plan which was found to be more economical than in using salaried nurses for this purpose. In this way the larger stations near the center of the city can be maintained economically, but small stations, and at a distance from the center of the city where considerable time is required daily to haul the milk, are too expensive. To be conducted economically some way of distribution through a retail distributing milk company is necessary to make it possible to reach the babies scattered over the city who need the help of the milk stations.

The milk used in this work was obtained principally from ———. Both of these herds consist of high-grade cattle, tuberculin tested, properly housed, grain fed; and the milk was handled with such care, being bottled at the dairy in bottles furnished by the association and shipped in ice, that the tests for cleanliness were uniformly excellent. During the year approximately 46,000 quarts of this milk were used.

Six public educational meetings for mothers were held in the summer, one at the Jewish Federation, South Meridian Street, two at Mayor Chapel, Norwood and West Streets, one at Christamore Settlement, and one at the Church of the Assumption, Blaine Avenue, West Indianapolis. These meetings were addressed by physicians on subjects of practical interest to mothers on the care of small babies. The aggregate attendance at the meetings was 117, which indicates a fair beginning.

The total expense for the year amounted to \$8,317.56, of which the greater part was used for milk and for personal service of trained nurses. This expense was covered in part by a city appropriation, through the department of health, of \$4,000; by receipts from sales of milk amounting to \$1,827.07; by specific contributions from churches, lodges, Sunday school classes, and individuals aggregating \$900 for certain stations or certain babies; the balance being provided through the general contributions to the Children's Aid Association. Voluntary services of many kinds, professional and otherwise, and useful materials have been generously donated. For all these kindnesses and to all those who have assisted, the association is deeply grateful.

Milk Commission Statistics, January 11 to December 31, 1912.

WORK DONE.

Number of babies helped—

Feeding cases	468
Nonfeeding cases	568

Total	1, 036
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Visits of trained nurses to the homes of children	4, 928
Number of clinics held, doctor and nurse attending	210
Number of children examined at clinics	882
Special treatment given by nurses	895
Special day cases (sick babies cared for during the day by nurses)	245
Special modifications made by nurses	950
Quarts of milk distributed to feeding cases	45, 912
Deaths among feeding cases	14
Nursing mothers registered	63
Mothers' meetings held	16
Attendance	117

EXPENSES.

Milk account	\$5, 640. 91
Salaries	2, 178. 00
Car fare	155. 00
Printing and stationery	71. 00
Feeding supplies	15. 00
Miscellaneous	87. 85
Total	8, 317. 56

Campaign in New York City in 1911.¹—The 27 stations founded by the milk committee were situated in the most congested parts of the city. The object of the committee's campaign was to make a demonstration of the value of milk stations in reducing infant mortality, to show that these stations should be situated in the most densely populated districts of the city, and that the ordinary store was suited for a milk station.

The plan of campaign was as follows: Each station was in charge of a graduate nurse, especially chosen for her knowledge of infant hygiene, for her interest in the problem, and her willingness to give herself as well as her time to the work. She was assisted by a matron. In certain districts where the population was almost entirely foreign and where English was spoken and understood as rarely as in Italy or Russia, a matron was selected, when possible, who was able to talk the language of the district. When two or more languages must be spoken an interpreter was provided in addition.

Each nurse canvassed her district from house to house, looking for babies, leaving the folder of the station with the mother, and offering to help her keep her baby well. That was the great thing the stations tried to teach—to prevent sickness. The windows of each station were adorned with placards in various languages inviting mothers to make use of it. The outside of each station was painted a light, bright blue, and the "blue fronts" became a regular expression of the district, being incorporated into many foreign languages.

The milk-committee stations tried first and foremost to encourage maternal nursing. Mothers were told how necessary it was and how it would save the baby many of the dangers of the hot weather. Not only were they urged to nurse their babies, but they were taught to care for themselves so that they could nurse them. They were told what to eat and, more important, what not to eat and drink. When breast milk seemed to be failing they were provided with milk and, if necessary, nourishing food, to try to increase the ability to nurse. When nursing was impossible, artificial feeding was ordered by the doctor in attendance at the station. Each baby was treated as an individual and the food ordered according to its individual needs.

Let us trace a baby through its whole progress at the station. The doctor was in attendance at definite hours twice or three times a week. If a new baby was brought to the clinic it was seen by the physician and its food ordered by him. If brought in at another time, after a preliminary talk from the nurse in which the whole system was explained, the mother was asked if she wanted to enroll her baby. If so, it was stripped and weighed by the nurse and the weight recorded on the individual chart. The nurse's record and the history card were then filled out and the nurse ordered a temporary feeding for the child, according to instructions very carefully prepared by the supervising physician and indorsed by the medical council. If the baby was sick it was sent to a station where a doctor was in attendance that day, or the station doctor was communicated with and arranged to see the baby.

Its milk having been ordered, the mother procured her supply of milk bottles, barley flour, etc., and returned to her home, whither the nurse speedily followed her. At this visit she was taught how to prepare the food and in her own home given a lesson in general hygiene. The formulæ ordered for the babies were of the simplest kind possible. Whole-milk mixtures were used almost exclusively. She was then told to bring the baby back to the station on the next clinic day and to come every morning for her supply of milk. She was also urged, at the first sign of illness, however slight, to repor

¹ "Infant Mortality and Milk Stations," Special Report of the Committee for the Reduction of Infant Mortality, New York Milk Committee, 1912.

at once to the station. On clinic days every baby was stripped, weighed, and examined by the station physician, its progress discussed with the mother, any necessary changes ordered, and the nurse instructed what to do. Very sick babies were referred to hospitals or to private physicians.

If the mother was unable to buy milk, through an arrangement with the Charity Organization Society, the Association for Improving the Condition of the Poor, and the United Hebrew Charities, such cases were immediately reported to them, and were at once investigated. * * * As the nurse went about from house to house, from family to family, she found many expectant mothers. Part of the campaign was to get in touch with these women and to try to advise and teach them so that they might pass successfully through their pregnancy and be in physical condition to nurse their babies. * * * The milk used came from tuberculin-tested herds and was of the highest standard. It was sold for 7 cents a quart. The contract for this milk was awarded after bids had been asked for from the chief milk dealers of this city. A constant watch was kept on the quality of this milk. Bacterial counts were made daily from samples taken from various stations. * * * In order to estimate the mortality among the babies in the areas under the influence of the milk stations, the following method was adopted: A map was made and plotted out showing the location of the station and the number of babies enrolled in each block surrounding the station. In this way the actual sphere of influence of the station was determined. A few babies came from longer distances and therefore from outside the district. In order to determine the mortality in the district thus established, a search of the records at the health department and a tabulation of all deaths occurring in the months of June to November were made for the years 1910-11. In order to determine the infant mortality it was necessary to tabulate the births by blocks in the same area. * * *

The following conclusions seem to be warranted:

First. That milk stations did have a distinct influence in diminishing the mortality among the babies in the districts in which they were situated.

Second. That the milk stations did not indirectly encourage artificial feeding—32.4 per cent of all babies under 1 year of age were entirely breast fed; 60.6 were partly breast fed.

Third. That home modification, even among the very poor and ignorant, is possible.

Fourth. That the results, as shown by the mortality and by the condition of the surviving babies at the end of the period of demonstration, prove that as good results can be obtained as when already modified milk is distributed.

Campaign in Philadelphia.¹—A conference was held early in the summer (1909) at which plans were considered for reducing infant mortality. As a result, the Modified Milk Society, various settlements, and a number of women's clubs conducted work along independent lines. The health department placed its medical inspectors in the most congested parts of the city to canvas for sick babies and to instruct mothers in their care. Milk dealers were provided with bags upon which were printed simple directions as to the care of the milk and the feeding of the baby.

In 1910 a conference was called by the mayor. This was attended by representatives of some 200 agencies, the object being to bring about a better working relation between the various organizations engaged in summer work for mothers and children. As a result of this conference a bureau of registration

¹ "Infant Mortality and Milk Stations," Special Report of the Committee for the Reduction of Infant Mortality, New York Milk Committee, 1912, p. 90.

and information was established at the city hall. A directory was published and distributed giving the names of the agencies and the kind of service each was prepared to render.

The Modified Milk Society established 10 distributing stations and later opened 8 more. The city council appropriated funds to maintain a corps of eight nurses, and by utilizing the medical inspectors and district physicians, a temporary division of child hygiene was established. This division began intensive work in June in four of the most congested wards. Other organizations assisted by furnishing nurses, who reported daily to the health department and worked with their nurses.

Previous to the closing of the schools in the four wards selected, demonstrations were given to girls in the grammar schools in the care of babies. This work was done by medical inspectors and school nurses through the cooperation of the school authorities. A house-to-house canvass was carried on in the district by the health department nurses to instruct mothers in their homes.

At the central office a careful system of record keeping for each case was installed. Day and night telephone service was established for receiving requests for aid in emergency cases. The police and fire departments cooperated by instructing all police stations and fire houses to forward by telephone any request for medical or nursing aid. A large number of bulletins, posters, and circulars were distributed, chiefly through the police department.

Free ice was distributed, midwives were brought under inspection, and several baby farms were closed.

There was a reduction of 40 per cent in the deaths of children under 2 years in the four wards where the work was concentrated. In the city itself, during the three summer months, there was an increase of 132 deaths over those in 1909, though the proportion of the total deaths which occurred under 1 year fell 0.5 per cent.

In 1911 a still more vigorous campaign was waged. A "milk show" was held, which was attended by 110,681 people.

The city council voted \$5,000 for the summer work and the nursing staff was increased. The work was carried on in four wards. The mayor appointed a strong commission to investigate and report upon the whole subject of milk supply. The refrigeration of milk in transit was required for the first time. In the four wards where the nurses were working there was a reduction of 11.3 per cent in all deaths under 1 year from the 1910 figures and of 34.6 per cent in diarrheal deaths under 2 years.

LITTLE MOTHER LEAGUES.

"Little Mother Leagues" and "Little Mother Classes" in the public schools represent efforts made in New York, N. Y., Kansas City, Mo., Cleveland, Ohio, and Milwaukee, Wis., to carry instruction into the home from another angle. "Little Mothers" are the school girls who have to help care for babies or for younger children at home. Of course the schools of every city have many such, and as they live in all parts of the town and come from every class, it follows that to reach them is to influence an ever-widening circle of mothers at homes where instruction is most needed. The policy in New York City was to organize these school girls who were caretakers of lit-

children into groups and teach them the care of babies. These groups were called "leagues" and the whole organization was "The Little Mothers' League." Dr. Josephine Baker, of the New York division of child hygiene, in a paper before the International Congress of Hygiene and Demography, in September, 1912, says:

The aid of over 20,000 girls from 12 to 14 years of age was enlisted and made of practical value by the formation of "Little Mothers' Leagues." These are still one of the most important branches of our work. The girls are taught all practical methods of baby hygiene and feeding. The potential value of training young girls for intelligent motherhood is not only of immense importance, but the immediate results have been striking in the improved care that is given to the babies who are directly under the care of these young girls. As true prevention work, it ranks of first importance in the prevention of infant mortality in this and the next generation. In all, 239 of these leagues were found in 1911, and practically an equal number have been organized this year (1912). Weekly meetings are held for instruction. Each league is under the supervision of a doctor and a nurse from the division of child hygiene. Each weekly lesson takes up some particular phase of baby care. The doctor gives a short, simple talk; then, with the nurse, demonstrates his subject. Our outline embraces the importance of breast feeding, hygiene of the home, cleanliness, ventilation, etc., hygiene of the infant, including bathing, dressing, and value of fresh air, infant feeding, with methods of milk modification. The lessons are simple and practical, and the children are required to carry out each part of the work. Babies are not lacking for demonstration purposes, for nearly every little mother brings her own charge to the meetings, and often the rivalry is great to have "my baby" chosen as an object lesson of health and right living. The members write and act little plays, the play always hinging upon some newly discovered way to keep the baby well. The real iniquity of lolly-pops and dill pickles as baby food is being uncovered, and these and kindred baby pacifiers of former days are being relegated to oblivion.

In Kansas City and in Milwaukee all girls desiring to enter these classes are enrolled, whether or not they are caretakers of babies at home. The health department undertakes to teach baby hygiene through the public schools to all girls who care to avail themselves of the opportunity by joining the classes—a step, in short, toward the movement in French and German schools in education for motherhood.¹

In Cleveland, Ohio, instruction is given to girls in the seventh and eighth grades by the introduction of an infant hygiene division in the domestic science department of the schools. On June 9, 1913, there were 48 classes a week, with 884 girls taking the work. The course consists of six lessons, as follows:

Lesson I.—How to keep baby well. Causes and prevention of high death rate.

¹ At the last International Congress of School Hygiene, at Paris, on the proposition of Dr. Pinard, a resolution was passed that in schools for girls the care of infants should form an integral part of obligatory instruction in all the primary schools, and examinations should be passed in these subjects.—*American Journal of Sociology*, January, 1912.

Lesson II.—Growth and development of normal baby.

Lesson III.—Pattern demonstration. Each pupil cutting patterns for baby's outfit.

Lesson IV.—Feeding: Maternal nursing, artificial feeding, dangers of patent foods. (Charts for five lessons.)

Lesson V.—Bath: Things necessary, preparation, how much good it does baby.

Lesson VI.—Common illness among babies. First home treatment in beginning of intestinal disturbances.

VISITING NURSES.

VALUE OF SERVICE IN PRENATAL AND POSTNATAL WORK.

The warning note against placing too much dependence upon the simple pure-milk station which comes up from so many cities is struck with more certain sound from a number of cities which place practically all of the emphasis upon visiting nurses and the instruction of the mothers in the homes.

In an address before the International Congress of Hygiene and Demography, held in Washington in September, 1912, Dr. Josephine Baker, director of child hygiene, department of health, city of New York, on the reduction of infant mortality in New York City said:

The evolution of the infants' milk station is essential. Pure milk, however desirable, will never alone solve the infant-mortality problem. Under our system of home visiting to instruct mothers in the care of babies we have demonstrated that babies may be kept under continuous supervision at the cost of 60 cents per month per baby, and the death rate among babies so cared for by us has been 1.4 per cent. The death rate among babies under the care of the milk stations has been 2.5 per cent, and the cost \$2 per month per baby. Without overlooking the value of pure milk, I believe this problem must primarily be solved by educational measures. In other words, the solution of the problem of infant mortality is 20 per cent pure milk and 80 per cent training of the mothers. The infants' milk stations will serve their wider usefulness when they become educational centers for prenatal instruction and the encouragement of breast feeding and teaching better hygiene, with the mother instructed to buy the proper grade of milk at a place most convenient to her home.

The value of pure milk where babies can not be breast fed, however, must not be underestimated. No amount of cleanliness or care on the part of the mother can entirely offset the dangers that come through polluted milk from dirty dairies. The city health officers, placing most stress upon nurses and instruction, do not go so far as to recommend that the milk problem be allowed to take care of itself.

"The Work of the Public Welfare Committee of Essex County for the Reduction of Infant Mortality in Newark," written by Dr. Julius Levy, says:

Our survey of the infant-mortality problem in Newark revealed the following facts:

During the past decade there were more deaths of infants under 1 year of age than from tuberculosis in all forms and at all ages. That is why the section on health of the public-welfare committee felt called upon to devote itself to the subject.

While it was found that the greater part of these deaths occurred in about four districts, the clinics and hospitals were often not in the center of these districts and therefore not where they could do the greatest amount of good.

It was found, further, that the doctors and nurses usually could not speak the language of the mothers; and so at best could have very little effect in eliminating what I believe is the greatest single factor in this problem—ignorance made hidebound by prejudice.

It was further found that though modified milk could be obtained at a milk depot, relatively very few mothers could avail themselves of it on account of the distance, and though certified milk has been sold here for more than 15 years, practically all of the mothers in districts of highest mortality were buying very filthy store or bottle milk. The one fact, however, that was most astounding of all, was that while there has been a reduction of infant mortality in Newark during the past 10 years and though certified milk has been introduced and a milk depot operated, the infant mortality from diarrheal diseases showed a very marked increase in the first half of the past decade and was actually higher at the end of the decade than at the beginning. The reduction of infant mortality has been due to factors not directly influenced by milk supply and feeding.

As a result of these and other studies and observations, we were convinced that milk is not the greatest single factor in the infant-mortality problem and that the distribution of modified milk is not the way to solve this complex problem. Indeed, I have long felt that the milk depot, in the first place, increases the number of artificially fed, and, secondly, does not reach the infants that require it most—those with the most ignorant and indifferent mothers—nor, indeed, when the mortality among infants is highest, before the third month of life.

Our plan found its basis in the common knowledge, obtained both empirically and biologically, that mothers' milk is the only proper food for infants; that mothers can nurse their infants successfully in greater numbers and for longer periods than obtains to-day—that the failure to nurse wholly or partly is due, in large part, to ignorance, inherited prejudices and superstitious beliefs that are fostered by anxious grandmothers, ignorant midwives, and I am sorry to admit, indifferent doctors; in a lesser degree to the equally preventable social and economic conditions of overwork, undernourishment, tuberculosis and other debilitating diseases. Our plan is nothing more than to try to induce mothers to accept our knowledge of the importance of maternal nursing and its *rationale*, of the hygiene of infancy, of the importance of obtaining a clean tuberculin-tested milk and then taking proper care of it in the home. Our method has for its fundamental thought that mothers can only be convinced of these somewhat recently emphasized facts by doctors and nurses who see the mothers frequently, know their customs, habits, and prejudices, speak their language—yes,

and even their dialect. Our ultimate purpose is to conduct our work in such a manner that the public and the authorities will be convinced that infant-welfare work is of such value and importance to the entire community that it shall become a part of the municipal activity for the conservation of public health.

WORK IN DIFFERENT CITIES.

Boston is one of the cities where special attention has been given to the question of nurses and in a letter to this bureau, dated February 25, 1913, the health department says:

At present we have 10 nurses in the division of child hygiene doing prenatal and postnatal work. The work consists in instructing and advising expectant mothers and mothers of young infants, and in visiting regularly such mothers to see that proper care and attention is given to the child. This continues during the first year of infancy. Special attention is given to bottle-fed infants, as the mortality among these has been high, as you will note by the reports I am sending. The recent law passed by the Massachusetts Legislature compelling physicians to report births within 48 hours after birth has been a great aid in this work.

The board of health is at this time making estimates as to the cost of providing milk stations in this city, as in New York, and believes that this will help greatly during the summer months in saving the lives of infants.

During the summer months it is recommended that mothers take their infants on the Floating Hospital, which is a large steamer supported by public contributions. The steamer leaves the wharf daily at 9 a. m. cruising about the harbor and at times anchoring in the lower bay and returning about 5 p. m. Physicians and nurses are in attendance on this steamer to take care of on an average 200 per day. This is shown to be very beneficial and a great aid in the campaign to save the lives of babies.

The instructions to the Boston nurses are thus condensed in the report of the department:

These nurses will be expected to have accurate information concerning every baby in the district assigned to them.

Breast-fed babies will cause little or no anxiety. The nurse will visit these cases to make sure that breast feeding is maintained; to advise the mother on the care of the breasts, and on general hygienic rules for the preservation of her milk and the care of the baby.

Bottle babies who are under the care of the family physician will be visited by the nurse to make sure that such care is continuous; the services of the nurse will be offered to the tired-out mother in assisting in preparing the baby's food and in carrying out the directions of the family physician. It is expected that the bulk of the work will be among the bottle babies of those who are unable to employ a physician. Recommendations will be made to these mothers to place their babies under the care of the nearest pediatric clinic at once before they show any signs of illness. Every assistance will be rendered these mothers by the nurses in carrying out the advice and instructions given at the clinic, and unceasing attention will be given by the nurses to the sick babies of this class, particularly during the summer months.

The division of child hygiene is entitled only to a portion of the money appropriated for the maintenance of the board of health. The erection of tents at the seashore, the employment of additional nurses in such tents to assist in

the care of sick babies, the maintenance of milk stations have been considered, but the amount of money available for this division prohibits the undertaking of such projects this year.

In Bridgeport, Conn., a nurse visits all the families where a newborn baby has arrived, and where her services are likely to be an advantage, and gives advice and instruction in the care of the baby. Leaflets containing such information printed in the mother's own language are left with the mother. Where breast feeding is impossible the nurse urges the mother to send daily to the milk station for the baby's milk supply.

Fall River, Mass., reports:

Since last July a visiting nurse has been employed who is continually visiting the homes of newly born infants whose addresses are furnished her daily. She supplements the verbal instructions to the mother by explaining and demonstrating the proper care of infants, urging breast feeding, modification of milk, etc. Since the nurse's employment the mortality among infants has been very materially reduced, and we hope during the coming year, by an appropriation asked for, to be able to employ an additional nurse.

In Jacksonville, Fla., the city health department directs nurses employed by private organizations. Jersey City, N. J., Cambridge, Mass., Duluth, Minn., Evansville, Ind., Fort Worth, Tex., Grand Rapids, Mich., Memphis, Tenn., Rochester, N. Y., and other cities resort primarily to the nurse system. The health officer at Grand Rapids says: "I will recommend a special feature that we have used in our city for the past two years for general adoption, as follows: The visitation by trained nurses within 24 hours to every household reporting a birth."

Some cities do not attempt to visit the homes of all newly born infants but have various methods of selecting by districts or otherwise; for instance, the Los Angeles, Cal., authorities report that:

During the school vacation the municipal nurses make home calls on all maternity cases, in the house courts and in the congested districts, reporting to the milk station all cases where breast feeding is impossible, obtaining modified milk for infants, or assistance where mothers need such.

The report from Richmond, Va., states that:

We believe the instructive end of the work to be all important, and we have nurses for this purpose (five in number) at the present time. Babies are selected by assuming that all babies in some districts should be under supervision and that all twins and illegitimate babies are proper subjects wherever found. This information is obtained from our certificates of births, while babies in special districts are located both by birth certificates and by house-to-house canvass. * * * I have been for some time convinced of the infectious origin of a very considerable part of infantile diarrhea. For this reason our nurses are now told to give special instructions regarding the disinfection of diapers. The other points covered by them are, of course, seeing that the baby gets proper food and clothing—both as regards warmth of clothing in winter and as little clothing as possible in summer.

The health department of Kansas City, Mo., writes this Bureau, under date of March 17, 1913, as follows:

I would say that we were among the first of the western cities to take up the work of prevention of the number of infant deaths during the hot summer months, and we have established stations over the city, with nurses and physicians attending, where the poor can go to receive medical advice and examination of the baby, and, if placed on artificial feeding, to get pure milk at cost. We also give milk to those mothers who are unable to purchase the same, and instructions are given by the nurse at the dispensary how to prepare milk for modification.

We intend to employ six nurses and utilize six of the medical school inspectors this summer at our stations to care for those babies who become ill. It is my opinion that, in order to cut down the death rate among infants under one year old, prenatal instructions should be given at all dispensaries, and that a follow-up system should be employed among parents where births are registered in certain districts which have a high death rate. They should be visited by nurses and carefully looked after, with instructions how to raise the baby intelligently and not to remove the child from breast feeding unless there is good reason for doing so. I think a false security has been given out over the United States with regard to milk stations saving babies, and this false idea should be corrected in the minds of many who have expected to accomplish the object sought. I can not help but emphasize that prenatal instruction, with advice from competent authority regarding the sanitation of the home, will in time bring about the desired results, rather than a dependence upon the milk depots.

Johnstown, Pa., begins this year with a visiting nurse under the control of the Civic Club. Smaller cities make a beginning by employing a nurse, whereas a more elaborate plan of campaign would not be possible. Montclair, N. J., reports for 1912:

Prevention of infant mortality.—Nurse gave part of her time to the instruction of mothers in the proper modification of milk for infant feedings. A clinic was maintained and milk sugar and other supplies were furnished when needed. The total clinic attendance was 286, and the number of feedings taught was 414.

Dr. Charles V. Chapin, health officer of Providence, R. I., says, "We attempted for two years to distribute clean milk to the babies of the poor, but we decided the money could be better spent on trained nurses." Writing to this Bureau, under dates of February 19, and May 5, 1913, Dr. Chapin says:

I would say that most of the baby-saving work in this city is carried on by the Providence District Nursing Association. They employ five nurses for this purpose all the year around, and are likely to put on another during the summer. A very large number of babies are referred to the nurses by the doctors, and are cared for under the direction of the latter. Some of the most effective work is in connection with babies attended by midwives, amounting to about 25 per cent of all. The midwives report each birth immediately, and a nurse employed by this department at once visits each case and refers all that need them to the district nurses.

There are two consultations maintained by the Congress of Mothers and the district nurses, and another is projected for the coming summer.

Three very efficient dispensaries are maintained by different agencies.

There is no very pressing need for milk stations in this city, but the establishment of one or two on a small scale is being considered. * * *

Milk inspection in Providence is not a function of the health department. The milk inspector is an independent officer elected by the board of aldermen. Our inspector is a very efficient officer, and has done much to improve our milk supply. Unfortunately more and more of our milk is railroad milk, coming chiefly from Connecticut, but a large amount is still brought in by the producers themselves or their neighbors. The milk inspector has done much by personal visits to the farms and insistence on essentials: (1) sterile utensils, (2) ice, (3) clean barns. A "call down" when "bacteria run up" is his motto.

The midwives are required to report all births immediately on postal cards. They report very well, as a rule. About 25 per cent of all births are by midwives. The baby nurse of the health department promptly visits all babies, and turns over to the district nurses all cases needing attention. The District Nursing Association has five baby nurses. They not only supervise all midwives' babies under my general supervision, but they look after a large number who are referred by physicians.

All these nurses apply treatment for ophthalmia, but call in the health department oculist whenever it is at all necessary, or get the child to the hospital.

Dr. Chapin has issued, for 1913, from the health department a "List of Milk Dealers Who Produce the Milk Which They Sell." It is issued for the convenience of physicians and nurses, and gives the name of each local dealer, the analysis of the milk he handles, both as to fats and total solids, and the bacteria count per cubic centimeter, giving the lowest, highest, and average for his product. It thus serves as a guide in the selection of milk for bottle-fed babies wherever found in the town.

Montclair, N. J., in its annual report gives a somewhat similar survey of the milk, as does Erie, Pa.

The Nashville, Tenn., city health department reports:

In connection with the operation of the milk dispensaries, the district nursing feature with home modification, distribution of literature, organizing of clubs, instructions given by lectures and personal work of the nurses, we also furnished gowns, napkins, and other articles of clothing where needed. In connection with this we also looked after expectant mothers, referring them to hospitals for confinement, or where this was impractical we furnished physician, nurse, or sterile sheets and all accessories to insure against infection in their homes. For the year 1913 we have increased our nursing force to four, we will operate four milk stations, and in the future will use these stations as a basis of operation in our baby-saving work. You also asked, "What special feature of your system would you recommend for general adoption?" I believe the making of milk dispensaries the basis of operation to be the best way to handle this work. We have furnished from stations modified milk free, and this work is strictly a part of the operation of the health department, and has no connection further than cooperation with private charity.

PRENATAL WORK.

When it is realized that practically 38 per cent of deaths under 1 year of age are due to causes mainly dependent upon the health and condition of the mother during her pregnancy and confinement; that within the registration area of the United States, of 154,373 infants under 1 year of age, who died in the year 1910, 14,946, or nearly 10 per cent, lived less than one day; that 36,351, or practically 23.5 per cent, lived less than one week, it will be seen that the infant mortality problem can not be solved adequately by any measures which leave out of their scope some attention to the care of expectant mothers. Since the above sentence was written "Mortality statistics" for 1911 has been issued by the Bureau of the Census, showing a more distressing situation than was revealed by the figures for 1910. With an increased death registration area (now covering 63 per cent of the total population) there was a decrease in deaths of children under 1 year to 149,322 as against 154,373 in 1910. But those who lived less than one day increased not only relatively but absolutely, i. e., from 14,946, or not quite 10 per cent, in 1910 to 18,074, or 12.1 per cent; those living less than one week increased from 36,351, or 23.5 per cent, in 1910 to 40,883, or 27.4 per cent, in 1911. These figures show that the efforts made to save babies through pure milk and more intelligent care have produced results, while the lack of organized effort to reach prenatal conditions for a very considerable period or over any extended area has further emphasized its need. This has been realized by a number of cities, as is shown by the following list, which is not, however, claimed or assumed to be in any way complete:

New York, N. Y.—The department of health is working in cooperation with the New York Milk Committee in a system of prenatal work among mothers, and the department intends to take up this work first in connection with the Infants' Milk Stations and later with a special force of nurses.

The New York Association for Improving the Condition of the Poor, the pediatric department of the New York Medical Clinic, and the New York Diet Kitchen include prenatal instruction in their work.

The Sixth Annual Report of the New York Milk Committee, 1913, contains the following statement on prenatal prevention of infant mortality:

During the summer of 1911, as part of the milk-station work, an experiment was tried looking to the reduction of the deaths of babies under 1 month of age. Appalling as is the fact that from 1 in every 10 to 1 in every 6 babies die during the first year of life, even more terrible is it that nearly 1 in 10 of all these deaths occurs during the first month of life. The baby does not even have the chance of a good start. This is generally admitted to depend largely on conditions acting before and during the birth of the baby, and

is exactly during this time that the least systematic effort has been made to improve conditions.

This preliminary attempt to meet this condition, which was carried on by two special nurses, promised such excellent results that it was decided to make this our chief work during 1912. * * *

The attempt is being made to reach expectant mothers as early as possible during their pregnancy. The nurse comes in touch with these women through cooperation with the city milk stations, relief organizations, settlements, churches, charity organizations, etc. Each woman is visited in her home by the nurse, who explains the purpose of her visit and gains her confidence by showing interest and a desire to help. Thus the nurse is able to appreciate the actual conditions of life and to give advice which can be followed under existing conditions.

The expectant mother is told how important it is for her to put herself in as good physical condition as possible, both for her own sake and for that of her unborn child. She is taught how to keep herself in this condition, what to eat, what not to eat, what kind of work she should avoid, and all the details which a woman in better financial circumstances would be told by her physician. She is encouraged to begin early to provide for the arrival of her baby. She is told what clothes it will need, and she is shown how to make them. The subject of her confinement is discussed. She is advised as to what arrangements she should make and encouraged to make them well in advance. The greatest stress is laid upon the value of nursing, both for the mother's sake and that of the baby. All the instruction that is given is of a practical character and the reason for doing certain things is always explained carefully by the nurse.

With each expectant mother is left a post card addressed to the nurse and filled out by her, to be sent to her headquarters if she is needed at any time. Visits are made every 10 to 12 days—oftener if needed. Examination of the urine is made at each visit, and if any abnormalities are found it is immediately reported to the office. The physician then visits the case, if necessary, or advises the nurse what to do under the circumstances.

The object of this campaign is to show that, under existing conditions, the mortality during the first month of life can be greatly reduced; also that the number of stillbirths and premature births can be reduced. With this idea in mind any woman is accepted as a patient, regardless of whether she is to be confined by a physician, in a hospital, or by a midwife. Whenever advice can be given on this subject a physician or a hospital is urged. Every effort is made to persuade the woman to put herself under the care of whoever is to have charge of her confinement at an early date. An effort is made to utilize the facilities already at hand, and whenever minor ailments or difficulties arise during the pregnancy the case is referred to a dispensary or to the physician, and the nurse's duty is not done until she sees that this advice is carried out. It is only in exceptional cases that the committee's physician cares for these women. * * *

Up to December 31, 1912, 1,375 women had been watched, helped, and cared for through their pregnancies and for a month after the baby was born. * * *

Results among supervised cases, as compared with the borough of Manhattan, show reduction of 32 per cent in deaths under 1 month and of 28 per cent in stillbirths among 1,398 babies, with two deaths among 1,375 mothers. * * *

Also it is encouraging to see that over 92 per cent of the babies living at the end of one month were being nursed entirely; that only 3.7 per cent were altogether deprived of the breast.

Kansas City, Mo.—The health department contemplates the establishment of several stations in those districts where mortality was highest last year, where expectant mothers can receive advice from the doctors and nurses in attendance.

Indianapolis, Ind.—On a small scale; the funds allowed are not sufficient to carry on the work in any extensive way. The expectant mothers in the poor quarters of the city are instructed at different times during their pregnancy, the majority from the third month on to term, others varying from the sixth to the eighth month and just before delivery. They are instructed as to proper care of themselves in regard to exercise, need of rest, freedom from worry. They are also instructed as to the care of the baby, its feeding, and the need of general hygienic precautions. In some cases the expectant mother is taken to the country or to the summer mission for rest.

Providence, R. I.—Health department issues a leaflet containing advice to women who are about to become mothers.

Baltimore, Md.—The Maryland Association for the Study and Prevention of Infant Mortality visits and instructs all expectant mothers registered in four leading hospitals.

Chicago, Ill.—The Mary Crane Day Nursery carries on prenatal work for the women of the Hull House Neighborhood. The Visiting Nurse Association gives some instruction.

St. Louis, Mo.—The Visiting Nurse Association carries on prenatal work as a part of their daily routine. The social service department of Washington University sends a nurse to visit all women who register in the obstetrical clinic.

Detroit, Mich.—Pregnancy clinics are in operation in connection with the stations of the Babies' Milk Fund.

Richmond, Va.—To a limited extent the health department carries on prenatal work. The nurses visit expectant mothers and give advice covering the usual well-known points.

Louisville, Ky.—The Babies' Milk Fund Association does a certain amount of prenatal work in connection with other educational effort.

Milwaukee, Wis.—The Milwaukee Child Welfare Division purposes sending out a folder containing instructions to expectant mothers, and has opened classes for mothers at three of its stations. The Milwaukee Maternity Hospital and Free Dispensary Association is also active in this work.

Nashville, Tenn.—In connection with the operation of the milk dispensaries the health department looks after expectant mothers, referring them to hospitals for confinement, or where this is impracticable, furnishes physician, nurse, sterile sheets, and all accessories to insure against infection in their homes.

Cincinnati, Ohio.—Extensive work toward caring for and educating expectant mothers is carried on by private organizations.

Fall River, Mass.—The District Nursing Association does excellent work in caring for expectant mothers.

Buffalo, N. Y.—The Visiting Nurse Association carries on prenatal work as part of the regular routine.

Boston, Mass.—The Boston Board of Health has a prenatal and postnatal subdivision of its division of child hygiene. Systematic and extensive work is carried on by the committee on infant social service in the Women's Municipal League, by the pregnancy clinic of the Boston Lying-in Hospital, and by South End House, one of the social settlements.

Inasmuch as this feature in the work of the prevention of infant mortality is comparatively new, the methods and instruction required under it are difficult of access. We here reproduce¹ the prenatal bulletin of the city of Providence, R. I., issued in 1910, and also the circular of the Oregon State Board of Health, very recently issued, believing that these will be especially acceptable to health officers in the smaller cities.

EFFECT OF HOUSING CONDITIONS ON INFANT MORTALITY.

In organizing a baby-saving campaign the first and main point of attack is usually the milk supply. There seems to be general agreement that this emphasis is justified, but there are also warnings from health experts against classing milk as the sole factor which brings about the high death rate among babies. A large number of disease-producing conditions are covered by the term "bad housing conditions." In a broad sense the remedy lies in having better building regulations, more supervision of tenement construction, more serious study of the congestion question in the large cities, and the field is so large that it is not possible to accomplish much in a quick campaign, beyond what good may result from giving the question publicity. But many of the accompanying evils, such as bad ventilation and lack of cleanliness, are being attacked through the influence of the visiting nurses, through instructions to "little mothers" and through educational printed matter, and doubtless the effort has an effect in lowering the death rate from "bad-air" diseases, such as pneumonia and bronchitis, which make up approximately 15 per cent of the total causes of infant mortality.

¹ See Appendix, pp. 90 and 91.

FIGHT AGAINST FLIES, GARBAGE ACCUMULATION, DUST, ETC.

While it is quite generally agreed that the germ of cholera infantum originates with the cow excreta, and that dirty milk is the principal carrier of the infection, it is by no means admitted that it is the only carrier—the house fly, as a death distributor, is only recently receiving the attention it deserves. Flies carry the infection not only to exposed milk but directly to the baby's mouth or to the nipple of its bottle. To limit the breeding of flies is the essential thing, and this can be done most effectually by giving the health office of the city power to enforce the collection of garbage and regulation of the city dumps. Insistence upon screens for the baby's rooms and for the baby's bed is a part of the campaign against infant mortality. Not only the flies, but dust, as is now well known, is a carrier of enteritis germs and through this the breast-fed child no less than the bottle-fed is exposed to the dangers of this summer terror. When it is understood that this germ when developed can and does use dust particles as a vehicle upon which to ride from pastures to the dusty streets and thence into homes, however carefully guarded and protected its little ones may be, the importance of permitting the health department to have supervisory control over street sprinkling in poor residence districts during June, July, August, and September becomes very apparent. The need for this precaution will be more readily understood when it is realized that the infant death rate in the hot weeks almost invariably falls for a few days after a general dust-settling rain.

STABLES AND STABLE FLIES.

Upon the opening of summer a thorough listing of all horse stables and livery barns, whether public or private, is made by cities like Seattle and Indianapolis, and complete measures for the control of the fly-breeding places instituted. Whether or not the stable fly is the only carrier of infantile paralysis it is certainly one, probably the principal carrier. Certain cities have issued circulars with magnified cuts of the stable fly to show the distinction between that and the common house fly. This distinction is not generally known and is not readily ascertainable by the eye. In fair weather the stable fly rarely enters the house; just before a rain or a storm it does enter the house and the common saying that "just before a storm the flies bite" is indicative of this. The house fly does not "bite"; it is always the stable fly that bites and it is its bite which is so often fatal to small children.

Below is the form of stable score card used in Seattle, Wash., in its inspection service to eradicate the breeding places of flies and control stable flies:

DEPARTMENT OF HEALTH AND SANITATION, CITY OF SEATTLE.
DIVISION OF INSPECTION.



Owner or lessee of stable.....
Location.....
Number of horses.....Number of cows.....
.....board or private.....
Date of inspection....., 191.....
.....
.....

		Score.	
		Perfect.	Allowed.
Character of building.....		10	.....
If of first class construction of frame or masonry.....	10		
If poorly constructed.....	5		
If dilapidated.....	2		
Floors, cement with proper gutters and catch basin, and sewer or cesspool connection.....		10	.....
Cement, badly laid.....	5		
Cement, broken.....	2		
Wood, tightly laid, as per ordinance.....	8		
Wood, open cracks.....	0		
Manure box, strictly fly proof, with vent.....		50	.....
Manure box, with any part open.....	5		
Manure box, tight without vent.....	40		
Surroundings, perfectly clean.....		30	.....
If there is water on lot.....	10		
If there is manure scattered about.....	3		
If premises are disorderly.....	5		
		100	.....

If any manure be on premises, exposed to flies, score will be limited to 49.
If floors are not properly cleaned, deduct 5 from total.
Filthy catch basins, deduct 5 from total.

FRESH-AIR CAMPS AND HOSPITALS.

Fresh-air camps have been operated during the summer months with good results in many cities. These are usually private philanthropies.

Although prevention is the chief end and aim of all work in behalf of children, nevertheless there must be hospital accommodations for those cases of illness which can not be properly cared for at home. As a city grows a hospital of some sort sooner or later becomes a necessity. However small such a hospital, it may contain from the first beds for children. As an example of what is possible on a large scale, Cleveland, Ohio, has a finely equipped Babies' Hospital, devoted entirely to the care of infants and young children. In almost any hospital it is possible to turn over to the exclusive use of children some of the beds and facilities, so that in case of emergency there will be some place where sick children may be taken care of.

EDUCATIONAL WORK THROUGH THE DISTRIBUTION OF CIRCULARS, PAMPHLETS, ETC.

The volume of printed instructions annually issued, as well as the character of the material, improves each year. State boards of health have issued exceedingly valuable pamphlets appealing alike to city authorities to bestir themselves and to parents to instruct themselves in the care of babies. These two audiences have not always been kept distinct, as much material directed at both is sometimes contained in the same pamphlets.

The North Carolina State Board of Health issued in 1912, as Special Bulletin No. 10, a pamphlet on "The Baby," using most effectively a cartoon of a mother gazing into the empty cradle. A part of the legend is "In future men will stop locking the stable door after the horse is stolen. They will not be content with spending on a funeral the money that would have saved the child; they will not tolerate the thought that a poor mother must bear 10 children to raise 5." "Save the Baby" articles are prepared by a number of the State boards, and furnished to the papers throughout the State. In North Carolina these are included from time to time in the State Board of Health's "Daily Press Service" publications. In other States as Iowa, Idaho, etc., where the general scheme is adopted the articles are prepared only on special occasions. A bibliography of these State and city publications would be valuable and may form a part of this report next year, but can not be attempted now.

Some cities, notably Chicago and Seattle, issue weekly or monthly bulletins which in addition to statistical matter contain much that is instructive as to the care of babies' food.

The health officer of Washington, D. C., issues instructive pamphlets on such subjects as the care of milk, the fly menace, methods of destroying flies, etc.

Lectures to mothers and moving-picture films, illustrative of the principles of baby hygiene, are also among the educational features which some cities have successfully adopted.

Of prime importance are the folders addressed to mothers and dealing directly with the care and feeding of the child. These are mailed immediately upon receipt of notice of birth of a child, or are delivered by the nurse who calls as the result of such birth notification. Such folders are issued in all of the principal languages spoken in the locality, as, for instance: Bridgeport, Conn., prints in four languages; Providence, R. I., in five; the State Board of Health of Pennsylvania publishes such circulars of instructions in five or six languages, and furnishes these to the various cities of the State.

Likewise the Department of Health of New York issues a pamphlet on "How to Save the Babies," which is distributed through the city health bureaus. Selected copies of these circulars in various languages will be found in the appendix. The importance of having these instructions in many languages will be apparent. It very often happens that the mother does not understand the language either of the visiting nurse or of the physician, and is hence thrown back, as soon as they leave the house, upon her own resources, or left to the mercy of advisory neighbors as ignorant as herself. It may frequently happen, also, that where health officers have no means or opportunity of doing anything more they can have such circulars distributed among mothers, or have the material printed in the local papers. Experience has shown that the editor, for instance, of the Italian paper is glad to print this material if the copy is furnished to him in Italian; the publisher of the Yiddish paper is entirely willing to publish it if it can be furnished to him in Yiddish, etc. It should be noted that these "Care of the Baby" and "Save the Baby" circulars frequently contain some information as to the care of the mother immediately before the birth of the child.

CONCLUSION.

It is evident that no universal program for civic baby-saving work can be laid down, because each community must begin at the point which is practicable or most urgent as shown by local conditions, but the following summary is offered as universally applicable:

(1) A continuous graphic statement of the births and deaths of babies, kept by means of different-colored pins to be placed day by day on a city ward map or, preferably, a block map showing each dwelling, is a simple means of keeping informed as to the points of danger.¹

(2) Complete registration of births is necessary in order that the baby may be brought under observation as soon after birth as possible.

(3) The appeal to mothers to nurse their babies can not be made too strong, since it is estimated that bottle-fed babies have only one-tenth the chance to live that breast-fed babies have.

(4) A clean milk supply is a fundamental need. The ideal is: Nothing short of clean milk for everybody. This calls for intelligent and effective inspection of farms, the means of transportation, and the shops where milk is sold.

Milk stations for distributing clean milk to babies, maintained by private philanthropy, are a useful beginning.

¹ See page 14.

(5) The organization of "Little Mother Leagues" or similar classes in the public schools, through which girls from 12 to 14 years of age are taught all practical methods of home making, including baby hygiene and feeding, ranks as important work in the prevention of infant mortality in this and in the next generation.

(6) All efforts for civic cleanliness serve the babies no less than the rest of the population.

In conclusion, as summing up the significance of the work described in this publication it seems fitting to recall the statement of a great sanitary authority that the infant death rate is the truest index of the welfare of any community.

APPENDIX.

HOW TO SAVE THE BABIES—IT IS NOT THE BABIES BORN BUT THE BABIES SAVED THAT COUNT.

[Suggestions to Mothers from the New York State Department of Health, Eugene H. Porter, A. M., M. D., commissioner. Written by H. L. K. Shaw, M. D., consulting pediatrician, and issued by the division of publicity and education of the State department of health, Albany.]

SAVE THE BABIES.

This booklet is prepared and placed at the free disposal of the mothers of the State of New York to assist them in the care of themselves during pregnancy and in the care of the baby after it is born. Copies can be obtained through the local health officer or the registrar or direct from the State Department of Health, Albany, N. Y.

At present it is published only in English; as the need is demonstrated it will be issued in other languages. It is by no means intended to take the place of the physician, whose advice should be frequently sought and followed.

It is the desire of the commissioner of health that a copy of these suggestions be placed in the hands of every expectant mother, or that it reach her as soon as possible after the birth of her child. The local registrar or health officer will cooperate in seeing that this wish is fulfilled.

HOW TO SAVE THE BABIES.

Do you know that out of every five deaths in New York State one is that of a baby less than a year old? A large percentage of these are due to causes which could and should be prevented.

An epidemic of smallpox gives rise to startling headlines in the newspapers and the entire community is aroused and alarmed. Public opinion demands prompt and vigorous action on the part of the health officers. Yet the number of deaths in this disease is exceedingly small in comparison with the number of preventable deaths among infants.

The New York State Department of Health is endeavoring to "save the baby" and enlists your support.

A large number of deaths among infants indicates the existence of insanitary conditions or of ignorance that will affect not alone the little children but the entire community.

The most important factor in the solution of this problem is the mother. She is the natural caretaker of her baby. A lower death

rate among the babies can only be accomplished through intelligent motherhood, maternal nursing, cleanliness and fresh air, and pure and properly prepared milk for the babies who have to be artificially fed.

The following suggestions are made in order that the mother can intelligently prepare and care for her baby.

BEFORE THE BABY COMES.

Health of mother.—A poorly fed or sickly mother can not give birth to a vigorous, healthy infant and successfully nurse it. Such a mother rarely carries her baby for the full 280 days. A woman who has had repeated miscarriages or whose labors have come on before time should, early in pregnancy, consult her physician in order that the underlying cause can be cured or alleviated. During pregnancy, and especially in the latter months, the expectant mother must have abundant rest and spare herself as much as possible. An extra amount of sleep is required by the pregnant woman, and a daytime rest for an hour or two is desirable. Select and consult your physician early in pregnancy. Keep yourself in good health. Hard household labor or factory work during the latter months of pregnancy tend to bring about miscarriages or the birth of puny and undersized children.

Exercise.—Exercise in the open air in the form of walks should be taken throughout the entire course of pregnancy. Violent exercise in any form should be prohibited, and unnecessary stair climbing must be avoided in the latter months. The sewing machine must not be used toward the end of pregnancy.

When labor is threatened before the proper time the mother should go at once to bed and remain perfectly quiet until the danger is well passed.

Care of nipples.—Small, flattened, or depressed nipples should be drawn out with the forefinger and thumb and held for five minutes night and morning during the two months preceding labor. The nipples should be carefully anointed each night with white vaseline and washed each morning with castile soap and warm water. This will soften and remove the milk which is secreted in the latter part of pregnancy, and which if not removed would form hard crusts and ulcerate the soft tissue beneath. Proper attention to the care of the nipples during pregnancy will make the act of nursing one of pleasure and satisfaction instead of one of pain and discomfort.

Diet.—The diet should be carefully regulated. A full, wholesome, and liberal diet is essential. This depends on the woman's tastes and habits, as food which agrees with one will not agree with another. Highly seasoned or very rich food should be avoided as well as fatty foods and coarse vegetables.

The following dietary is recommended during pregnancy and nursing:

Soup.—Any kind.

Fish.—Fresh fish of any kind, boiled or broiled. Raw oysters and raw clams.

Meats.—Chicken, beef, ham or bacon, veal, lamb, tender lean mutton. Red meat should be allowed in moderation and only once a day.

Cereals.—Hominy, oatmeal, farina, cream of wheat, rice mush, shredded wheat biscuits, etc.

Breads.—Stale bread, corn bread, Graham bread, rye bread, brown bread, toast, crackers.

Vegetables.—Potatoes, onions, spinach, cauliflower, asparagus, green corn, green peas, beans, lettuce, or other salads with oil.

Desserts.—Plain puddings, custard, junket, ripe raw fruits, stewed fruits, ice cream. No pastry.

Drinks.—Tea and coffee very sparingly, never more than one cup a day. No alcoholic beverages, beer, etc. At least two quarts of water a day. Milk, buttermilk, cocoa, malted milk.

At least one satisfactory movement of the bowels should take place daily; if there is any difficulty about this consult a doctor.

WHEN THE BABY COMES.

Send for the doctor.—Send for the doctor when the labor pains begin. He prefers being called too early than too late. A sudden gush of water signifies that the membranes have ruptured, and the mother should go to bed at once.

The bed should be prepared as follows: Place a rubber sheet or three thicknesses of newspapers next to the mattress and over this a clean sheet. Next place three thicknesses of newspapers over the middle and edge of the side of the bed and cover with a folded sheet, and then cover with a clean sheet. This top layer of papers and sheets can be easily removed after the labor and the mother lies on a clean dry sheet.

Everything should be in readiness for the reception and care of the baby. A warmed flannel blanket in which to place the baby after birth, and hot-water bottles to surround it, if the room is cold, are desirable. The baby should be exposed as little as possible during the bath, and the clothes and diapers should be warmed. Everything that comes in contact with the baby should be scrupulously clean.

Save the baby's eyesight.—The mother should insist that a drop of silver solution, as provided free of charge by the New York State department of health, be placed in the baby's eyes. This will prevent blindness. If the baby weighs less than four pounds it can best be taken care of in incubators, which are to be found in any well-equipped hospital. Your physician is required to make a prompt report of the birth to the registrar or local board of health. This is a matter of great importance, and don't let him forget it. The mother should remain in bed for at least two weeks after confinement. The womb does not return to its normal state for five or six weeks, and no hard work or active exercise should be taken during this period.

AFTER THE BABY COMES.

Nurse your baby.—If you love your baby, nurse it. Mothers' milk is nature's food, and no other food is as good. The chances of your baby living are nine times greater on breast milk than cow's milk or any other kind of food. Even though you have but little

milk at first, do not get discouraged. Be patient and try, try again. There are very, very few mothers whose breasts will not give sufficient milk if they will but encourage the baby to suck. This keeps the milk flowing and increases its flow. Even though you feel weak you can nurse your baby without danger to yourself. Only a few serious diseases forbid nursing. If you are in doubt consult your doctor. His advice is better than that of your neighbors.

Nurse your baby until the tenth month.—If you really can not nurse him as long, give him your milk as long as you can, for every drop he gets adds to his strength for his hard fight in life as no other food does or ever will. Keep your bowels regular. Constipation in the mother often causes colic in the baby. Follow the dietary shown on a preceding page and eat three plain, well-cooked meals a day at regular intervals. *Drink plenty of water*, but avoid tea, coffee, and beer. So long as the mother keeps well the baby will be well.

Nurse the baby regularly.—Feed him by the clock. From birth to three months feed every two and a half hours during the day with only one nursing between 10.30 p. m. and 6 a. m. After the third month feed him every three hours and do not nurse during the night. Do not let the baby remain at the breast more than 20 minutes. Never allow the baby to sleep at the breast at night. When the baby cries between feedings give him pure, warmed water without anything in it. Then let him alone. The mother should wash the nipple with plain, cold water before each nursing.

Wean gradually by substituting bottle feedings for breast meals—one each day during the first week of weaning, two each day during the second week, and so on until all are bottle feedings. If possible do not wean during the hot summer.

WHEN THE MOTHER CAN NOT NURSE THE BABY.

Substitute for mother's milk.—Cow's milk is the only good substitute for mother's milk.

It should come from healthy, consumption-free, and clean-kept cows and be promptly cooled. It should be milked in a clean stable by clean milkmen and bottled in clean bottles. It must be kept continually on ice until used for the baby. Common store or milkman's milk is not safe food for the baby, even though it tastes and looks good. The patent baby foods, condensed milk, etc., harm the babies in most cases and should not be used. They often make the baby fat, but not strong. If you can not afford the best milk get the best you can from a milkman whom you know to be clean. Place in a clean dish and boil the milk from 5 to 10 minutes. Cool as quickly as possible by placing the dish in another filled with ice water.

As soon as the milk is cooled prepare the food as directed by the doctor, using only clean dishes. The food is then poured in the nursing bottles and clean cotton batting is used for stoppers. These bottles are kept on ice if possible.

Homemade ice box.—A cheap ice box can be made as follows. Get a box about 18 inches square from your grocer and put 3 inches of sawdust in the box. Place two pails in the sawdust, one inside the other, and fill the space between the outer pail and the box with saw

dust. The nursing bottles filled with milk are placed in the inner pail and the pail is surrounded with cracked ice. The inner pail should have a tin cover. Nail several thicknesses of newspapers on the under surface of the cover of the box. This ice box should be kept covered and in a shady, cool place.

Care of nursing bottles.—The bottles should be cleaned immediately after feeding by first rinsing with clear water and then soaking in soda, borax, or soap water. Then clean well with a clean brush and rinse with boiled water. They should be filled with boiled water until ready for use.

Use only nipples which are slipped over the neck of the bottle. Nipples with tubes are convenient for a lazy mother, but they can not be cleansed thoroughly and may mean death to the baby. After each feeding cleanse the nipple thoroughly inside and outside. Boil the nipple at least once daily, and keep it dry in a clean covered cup or glass.

Early feeding.—Feed the baby one part milk and two parts water during the first month at intervals not less than two and a half hours and in amounts not more than four ounces (eight tablespoons).

During the second and third months use one part milk and one part water at three-hour intervals and five ounces (10 tablespoons) in amount.

After the fourth month give two parts milk and one part water at three-hour intervals and six ounces (12 tablespoons) in amount, increasing one ounce at each meal during each succeeding month. Barley water or oatmeal water can be used to dilute the milk. One level teaspoon of granulated sugar should be added to every three ounces (six tablespoons) of diluting solution (water, barley, or oatmeal water).

Warm the bottle to about body heat before giving it to the child, by placing the bottle in a dish of hot water. If the milk is not sweet do not give it to the baby. Wash your hands before touching the nipple. Shake the bottle before using. Never put the nipple in your own mouth to find out whether the milk is warmed enough. Try it on your wrist. Hold the baby in your arms while feeding it, and do not allow the baby to drink from the bottle longer than 20 minutes. If he does not take the whole feeding throw it out and do not save for the next time.

Don't overfeed.—Never coax the baby to take more food than he wants. Too much food and too frequent feedings overtax the digestion and lead to stomach and intestinal disturbances. This is what makes the baby cry. He cries because he has indigestion from too much food, not because he is hungry. Boil a pint of water every morning and put in clean bottle. Keep in cool place. Warm it before giving to the baby. Give as much as he will take between feedings.

After the eleventh month.—A well cooked cereal (farina, cream of wheat, strained oatmeal, etc., cook three hours) can be given once a day after the eleventh month in place of the noonday feeding. Beef juice with stale bread crumbs, broths, or a soft-boiled egg can be given in addition to the cereal after the twelfth month. A well-baked potato, boiled rice, rare roast beef, custard, corn starch, rice pudding, baked apple, apple sauce, stewed prunes, and bread and butter can be given after the fifteenth month.

Ham, bacon, or pork, cabbage, pickles, tea, coffee, or beer, bananas, berries, cake, candy, or ice cream should not be given to babies or little children.

Teething.—Teething rarely causes serious illness. If the child seems to be ill, do not put it down to teething, but consult the doctor.

Diarrhea.—As soon as the baby has diarrhea or vomiting, stop all food at once and give only boiled water or clear barley water until the doctor sees the baby.

Fresh air.—Give the baby pure fresh air day and night and keep the windows open but screened to exclude flies and mosquitoes. Keep the baby in the open air when possible, but avoid the sun during hot weather. Select the shady side of the street.

Avoid infection.—Keep the rooms free from soiled clothes and rubbish. Do not encourage the baby to play with cats or dogs; they often have disease germs in their fur. Do not let the child crawl around on a dirty floor or dusty carpet. Do not let it put playthings into its mouth.

Bath.—Every child should have one tub bath daily. On very warm days the 10-minute spongings with cool soda water (one teaspoonful of bicarbonate of soda to a pint of water) will add greatly to the baby's comfort.

Clothes.—Do not put too many clothes on the baby. A band, shirt, petticoat, and dress are all that are needed in the house. During very hot days a napkin, band, and a thin muslin slip are all that the baby needs.

Sleep.—Be sure the baby gets two naps a day and at least twelve hours of sleep at night. Do not let him sleep on a feather pillow. The baby should sleep in a bed or crib by itself—never in bed with its mother. Do not rock or jounce the baby and remember that constant handling is harmful. Keep the baby and bedclothes clean. Diapers should be carefully washed as soon as they become soiled and then dried in the open air. Do not use a diaper a second time before washing it.

Soothing sirups.—Under no circumstances should soothing sirups be given to the baby. They contain opium and are dangerous.

Good habits.—Train the baby into good habits. Do not get the child into the habit of expecting to be carried about if it cries. Train the baby to go to sleep by itself in the dark. A well-trained baby makes a well-behaved child.

RECIPES.

Barley water.—This is often used instead of water to dilute the milk and tends to make the curds of the milk more digestible. One heaping tablespoonful of barley flour and a pinch of salt are mixed with a little water into a thin paste and added to 1 quart of boiling water. Stir well and boil for 20 minutes. Add enough water to make 1 quart. Pearl barley requires more cooking. It should be boiled for at least 3 hours and must be strained before using. Make fresh daily.

Oatmeal water.—This is used in the same way as barley water, but it has a laxative effect. Stir two tablespoonfuls of oatmeal and a pinch of salt in a quart of boiling water and let it simmer for three

hours. Replace the water that evaporates so that there will be a quart when done. Strain. Make fresh daily.

Egg water.—To be used when the baby can not digest milk. Stir the white of one egg into 1 pint of boiled water, add a pinch of salt, shake thoroughly, and strain. This should be kept in the ice box or other cool place.

Beef juice.—Take rare broiled beef and cut into small pieces and press out the blood. This can be diluted with plain boiled water or barley water.

Broths.—Take 1 pound of meat, free from fat, and cook for 3 hours in 1 quart of water. Add water from time to time so that there will be 1 quart of broth. Cool, remove fat, strain, and add a little salt.

Whey.—Warm one pint of milk to blood heat and add one teaspoonful essence of pepsin or junket tablet. Let it stand until it jellies and then break up the curds with a fork. Strain through a cloth. What goes through is called whey and is used when babies can not digest cow's milk.

[Leaflet issued by New York City Department of Health.]

TEN REASONS WHY A MOTHER SHOULD NURSE HER BABY.

1. One death out of every five which occur at all ages is that of a baby under 1 year of age.

2. In the city of New York during 1910, 4,794 babies under 1 year of age died from bowel trouble, and 9 out of every 10 of these babies were bottle fed.

3. Out of the 16,213 babies under 1 year of age who died from all causes in New York city during 1910, one-third died before they were 1 month old.

4. A large proportion of these babies would have lived if they had been nursed by their mothers.

5. Mother's milk is the only safe food for a baby during the first six months of its life. If the weather is warm the baby should not be weaned until it is at least 9 months old. Cow's milk or prepared food can never equal breast milk as the proper food for the baby.

6. Breast-fed babies rarely have bowel trouble. Bottle-fed babies rarely escape having it, particularly during warm weather.

7. Babies fed on breast milk show the best development; the teeth will appear at the proper time, the muscles and bones will be stronger, and walking will not be delayed.

8. A breast-fed baby is not so likely to have bronchitis or croup, and if attacked by any disease has a much better chance of living than a bottle-fed baby.

9. Pneumonia in babies is fatal more often in bottle-fed babies than in breast-fed babies.

10. Your baby will have the best chance of living that you can give it if it is breast fed.

Surely these facts are worth considering before deciding not to nurse your baby.

Issued by order of the board of health.

SAVE THE BABIES.

RULES TO BE OBSERVED IN THE CARE AND MANAGEMENT OF INFANTS DURING THE SUMMER.

The hot weather of this season of the year is extremely dangerous to the lives of infants and young children, not only because of the depressing effects of high atmospheric temperature in general, but more especially because of the effect of hot weather upon all perishable articles of food, among which cow's milk holds the first place.

It is therefore highly important that cow's milk to be used for infant's food should be the purest and freshest that you can afford to buy. During the hot weather ice is absolutely necessary for the preservation of milk, and all milk used for food should be cooled by ice as soon as it comes from the cow and should be kept next to the ice until ready to be used. A little money spent for ice may prevent illness and its much greater expense for medicine, nursing, and medical attendance. As water is often a carrier of disease it is safest to use only boiled water for drinking or the preparation of a baby's food.

The following rules will aid you in keeping your baby well during the hot weather:

Breast feeding.—Every mother should endeavor to nurse her baby. Breast milk is the natural food of the newborn baby. There is no other food that can compare with it. A breast-fed baby has a much greater chance of living than a bottle-fed baby.

Immediately after birth do not give any kind of artificial food to the baby, while waiting for the breast milk to come. Put the baby to the breast every four hours, and give nothing else but water that has been boiled. The baby needs nothing else, and will not starve.

After the milk comes into the breast nurse the baby every two hours during the day and two or three times at night.

Don't nurse the baby whenever he cries; a moderate amount of crying helps to develop the lungs. Babies who are nursed irregularly, or whenever they cry, are likely to get indigestion and then cry the harder from pain. Nurse regularly and the baby will soon learn to expect its nursing only at the proper intervals. Give the baby a little boiled water several times a day.

After the baby is 2 months old lengthen the time between feeding to 2½ or 3 hours, with only one or two feedings at night.

Do not wean the baby as long as he is gaining and never do so except by advice of your doctor. Do not follow the advice of friends or neighbors about weaning. If the baby remains well but after a time stops gaining in weight, do not think that your milk is of no value, but consult your doctor about adding one or two bottles to help you out.

Bottle feeding.—If it becomes necessary to feed the baby either entirely or only in part upon the bottle, remember that the greatest cleanliness is necessary in all details of the feeding. As soon as a bottle is finished, it should be thoroughly washed with cold water, then cleansed with hot water and borax (1 teaspoonful to a pint of water) and put aside for further cleansing, before being used again. If you have only a few bottles and it becomes necessary to use the same bottle for the next feeding, boil it for a few minutes before putting fresh food into it. Never let the baby nurse from the remains of a bottle which he has not finished at once. Take it away from the crib, pour out the milk, and cleanse at once. Stale milk curds sticking to the inside of a bottle after a few hours become poisonous and may contaminate fresh milk coming in contact with them. It is better to have as many bottles as the number of the baby's daily feedings, so that all the bottles can be boiled together before the food is prepared in the morning.

Nipples.—The simpler the nipple the safer for the baby. Do not use complicated nipples, and under no circumstances buy a bottle with a long rubber tube attached to the nipple. It can not be kept clean and will certainly cause bowel trouble. After the bottle is finished the nipple should be removed at once, turned inside out over the finger and scrubbed with cold water and a brush kept only for this purpose. After use, always boil the brush.

The cleansed nipple should be kept in fresh borax water (1 teaspoonful of borax to a pint of water) in a covered glass. Rinse the nipple in boiling water before using it.

Do not put the nipple into your own mouth to find out whether the milk is warmed enough. Let a few drops of the milk fall on your wrist; if it feels too hot to your wrist it is too hot for the baby's mouth.

No general instructions can be given about the preparation of a milk mixture for your baby. Each baby needs a combination suited to his digestion. The mixture upon which some other baby is thriving may be too strong or too weak for your baby. Let the doctor tell you how to mix the food. If it is necessary to use cream in the mixture do not buy cream—it is likely to be stale—but get it by pouring off half a pint from the top of a quart bottle of milk, after cleansing the lip of the bottle.

Do not be guilty of constantly changing food for the baby as mothers are apt to do through the advice of "good" neighbors. Follow the instructions of your doctor.

During the summer the baby's food should be brought to a scald after it is prepared. It should then be poured into the clean bottles, corked with baked clean cotton wool and kept next the ice until needed. Do not heat a bottle when you go to bed and keep it in bed until nursing time, because you do not want to go to the ice box for it and heat it when the baby needs it. This is a certain way to make the baby sick.

Bowel movement.—A bottle-fed baby should have at least one and not more than two or three bowel movements a day. If the milk is clean to start with and has been kept cold, and all the feeding utensils cleaned as you have just been told, the baby's movements should be yellow in color, and not too hard to be passed

FORM 20B.—Italian.

SALVATE I BAMBINI.

CONSIGLI E SUGGERIMENTI PER LA CURA DEI BAMBINI DURANTE L'ESTATE.

Il caldo della stagione estiva è assai pericoloso per la vita dei bambini di tenera età, specialmente per i neonati, non tanto per le conseguenze dell'alta temperatura in generale, quanto, ed in modo speciale, per l'effetto che il caldo può avere su tutti quei cibi che possono andare soggetti a decomposizione. Fra questi, il latte di vacca occupa il primo posto.

È, di conseguenza, d'importanza massima che il latte di vacca che voi destinate all'allattamento dei bambini sia il più puro ed il più fresco che i vostri mezzi vi permettano di comprare. Durante la stagione calda, il ghiaccio è assolutamente necessario per mantenere fresco il latte. Questo, quando viene usato come cibo, deve essere raffreddato col ghiaccio non appena munto dalla vacca e deve essere tenuto in ghiaccio fino al momento in cui è usato. Pochi soldi spesi per un po' di ghiaccio possono tener lontane le malattie e qualunque spesa per visite mediche, medicinali o altro da esse derivanti. Siccome l'acqua, spesso e volentieri, è veicolo d'infezione e, quindi di malattie, si deve usare soltanto acqua bollita, quando deve essere bevuta, oppure una qualunque altro preparazione speciale per bambini.

I seguenti consigli e suggerimenti vi aiuteranno a mantenere i vostri bambini in buone condizioni di salute durante il caldo dell'estate:

Allattamento.—Ogni madre deve fare il possibile di allattare da sé il proprio bambino. Il latte materno è il cibo naturale del neonato e non vi è alcun altro cibo che può reggere al paragone. Un bambino che ha succhiato il latte dal seno materno ha molte più possibilità di vita di qualunque altro bambino allattato col biberon. Al bambino appena nato non date mai cibo artificiale. Avvicinatelo alla mammella ogni quattro ore e non dategli altro che acqua che sia stata ben bollita. Il neonato non ha bisogno di più e siate pur sicuri che esso non morrà certamente per mancanza di nutrimento. Non appena la mammella è colma di latte, allattate il neonato ogni due ore, durante il giorno, e due o tre volte durante la notte.

Non allattate il neonato ogniquale volta esso piange o grida.—Il piangere moderato è una delle funzioni che, nel neonato, contribuisce ad accrescere lo sviluppo dei suoi polmoni. Quei bambini ai quali il latte non vien dato regolarmente oppure ad ogni minimo accenno di pianto, possono spesso andar soggetti ad indigestione ed alle sue conseguenze. Allattate il bambino regolarmente e vedrete ch'essi

imparerà do sè stesso a chiederlo a tempo debito. Dategli pure spesso un poco d'acqua durante il giorno ed abbiate cura ch'essa sia stata prima ben bollita.

Lo svezzamento del bambino non deve assolutamente avvenire durante il suo sviluppo e se non prima non si è consultato in proposito un medico. Non state ad ascoltare i consigli e gli avvertimenti di amiche e di vicine, quando si tratta di svezzare il bambino. Se esso gode buona salute puranco non aumentando affatto di peso, non state a credere che la potenza benefica del vostro latte sia venuta meno. Consigliatevi invece con un medico e domandategli se una o due bottiglie di latte possono aiutarvi ad assolvere il compito materno.

Allattamento col biberon.—Qualora sia realmente necessario allattare il bambino, interamente o in parte, col biberon, tenete ben presente che la pulizia è cosa prima ed indispensabile in tutti i processi dell' allattamento. Non appena il biberon è vuoto, deve essere ben lavato con acqua fredda e poscia accuratamente pulito con acqua calda e borace (un cucchiaino sciolto in una pinta d'acqua). Più tardi, al momento in cui è necessario usarlo nuovamente, il biberon deve essere di nuovo lavato e pulito. Nel caso che voi abbiate poche bottiglie soltanto, e che sia indispensabile usare la stessa bottiglia, tenetela in un recipiente d'acqua bollente per qualche minuto, prima di mettervi dentro altro latte. Abbiate bene cura di non dare mai al bambino il rimenente di un biberon vuotato solo in parte. Togliete questo biberon dalla culla, vuotatelo del contenuto e pulitelo immediatamente. I filamenti del latte stantio o acido che rimangono attaccati al vetro divengono ricettacolo d'infezione e possono, di conseguenza, contaminare il latte fresco che ad essi va ad aggiungersi. È quindi consigliabile avere tante bottiglie per quante volte, durante il giorno, voi devete allattare il bambino. In questa guisa voi le potreste lavare e pulire insieme in acqua bollente ogni mattina.

Capezzoli di gomma.—Più semplice è questo capezzolo, tanto più consigliabile esso è per la salute del bambino. Non usate altri capezzoli e per nes suna ragione al mondo comprate biberons che abbiano tubi di gomma attaccati al capezzolo. Essi non possono essere mai tenuti abbastanza puliti e possono quindi causare disturbi viscerali. Esaurito il contenuto di un biberon, liberatelo immediatamente del capezzolo. Ciò fatto, col dito rovesciate questo capezzolo, come fareste con un guanto e pulitelo bene, in acqua fredda, con uno spazzolino che avrete cura di conservare esclusivamente per questo uso. È necessaria pulire lo spazzolino con acqua bollente ogni volta che lo si usa.

Il capezzolo, una volta pulito, deve essere costantemente tenuto in una soluzione d' acqua e di borace (un cucchiaino di borace in una pinta d'acqua) in un recipiente di vetro ben chiuso. Quindi, prima di essere nuovamente usato, è necessario sciacquarlo in acqua bollente.

Non mettete mai in bocca il capezzolo artificiale per accertarvi se il latte è caldo abbastanza.—All' uopo basterà che lasciate cadere qualche goccia sul vostro polso. Se è troppo calda vuol dire ne che è troppo calda per la bocca del neonato.

Non é possibile dare, in generale, consigli e suggerimenti circa il modo in cui deve essere fatta una preparazione di latte per il vostro bambino. Ogni bambino ha una costituzione fisica speciale ed abbisogna di una speciale preparazione adatta alle sue facoltà di-

gestive. Una preparazione che può essere buona per questo o quel bambino può essere troppo pesante o troppo leggera per il vostro. Lasciate che il medico vi consigli a questo proposito. Se è indispensabile usare della crema, non comprate mai della crema bell'e fatta—può benissimo essere stančia o acida. Prendetela invece dalla parte superiore della bottiglia del latte (quelle da un quarto) e soltanto dopo aver bene puliti gli orli del recipiente.

Durante l'estate, il latte destinato ai bambini deve essere alquanto riscaldato dopo la sua preparazione. Ciò fatto, esso deve essere versato in un recipiente ben pulito ed accuratamente chiuso da turaccioli di cotone sterilizzato, recipiente che deve essere costantemente mantenuto nel ghiaccio fino a quando il suo contenuto non viene usato. Non riscaldare mai la bottiglia allatto di andare a letto, ne' tenetela mai con voi fino al momento opportuno, affine di risparmiarvi l'incomodo di andarla a togliere dal ghiaccio e riscaldarla. Ricordatevi che questa trascuratezza e negligenza, spesso e volentieri, sono cause prime delle malattie dei figli vostri.

Funzione dei visceri.—Un bambino allattato artificialmente, cioè col biberon, dovrebbe, in condizioni normali, evacuare almeno una volta al giorno ma non più di due. Se, a buon conto, il latte è buono ed è stato mantenuto in fresco e se tutti gli altri ingredienti per l'allattamento sono stati anch'essi mantenuti nel modo dovuto, gli escrementi del bambino dovrebbero essere di color gialliccio e non troppo duri, in guisa tale da renderne difficile l'uscita. Se gli escrementi diventano di color verdiccio ma l'evacuazione non avviene più di due o tre volte al giorno, sarà bene somministrare al bambino un cucchiaino d'olio di ricino. Se, con tutto l'olio, il colore degli escrementi non tende a migliorare, consultate subito il vostro medico. Se lo farete immediatamente il medico sarà in grado di poter scongiurare a tempo quella serie complicazioni e malattie viscerali che minacciano di solito i bambini. Se gli escrementi rimarranno di color verdiccio e le evacuazioni aumenteranno sì da raggiungere il numero di cinque o sei nel periodo di ventiquattro ore, il vostro bambino soffre di visceri o è affetto da diarrea estiva. In questo caso non date più latte al bambino, ma soltanto acqua ben bollita fino a quando non arriverà il medico. Non sarà mai troppo tardi.

Non incominciate di nuovo l'allattamento fino a quando il medico non ve lo avrà permesso. State pur sicuri che il vostro bambino non morirà d'inedia se avrete sospeso l'allattamento e ricordate invece che ogni goccia di latte che date al bambino, in queste contingenze, non fa altro che peggiorare il suo stato. In queste condizioni, continuando l'allattamento voi causerete seri e gravi danni al bambino.

Vomito.—Un bambino allattato artificialmente, cioè col biberon, non vomita se il latte è puro e nella quantità adattata al suo fisico. Il vomito, di solito, è il primo indizio di una malattia, sia essa una della più pericolose oppure, se nell'estate, una diarrea estiva. Il vomito che avviene in queste condizioni può essere il primo indizio d'indisposizione e può far sì che i visceri non riprendano la loro funzione normale se non dopo parecchi giorni. Se il vomito si ripete, sospendete l'allattamento e date al bambino acqua soltanto, ma che sia stata prima bollita, tanto fresca quanto della temperatura solita del latte e consultate immediatamente il vostro medico.

Vestiti.—Non vestite di troppi panni il vostro bambino durante l'estate. Nei giorni di temperature torrida, liberatelo di gran parte dei panni che l'avvolgono; una leggera camiciola aperta ed un pannolino sono più che sufficienti durante giornate e nottate afose. Non usate mai vestitini stretti alla vita. Sottanine e camiciole devono essere a spalla.

Bagni.—Fate fare al bambino un bagno al giorno. Nelle giornate calde passategli sollecitamente su tutto il corpo una spugna bagnata. Il bambino ne risentirà subito il benefico effetto e dormirà meglio. Ogni volta che il pannolino è bagnato d'urina bisogna cambiarlo, dopo aver lavate bene ed accuratamente asciugate con cipria le parti basse del bambino. Lavate sempre in acqua bollente tutti i pannolini sporchi e non usate mai pannolini che sono stati bagnati d'urina e che sono asciutti senza essere stati lavati.

Le mosche.—Abbiate cura di tener le mosche lontano dalle bottiglie del latte e da qualunque altro cibo destinato ai bambini. Scacciatele quando le vedete posare sul volto dei vostri piccoli e ricordatevi che le mosche, ogni anno, sono causa di molte malattie a migliaia di bambini.

Aria fresca.—L'aria fresca è un così importante fattore nelle buone condizioni di salute del bambino quanto lo è il latte fresco. Durante l'estate, cercate per quanto più vi è possibile di tenerli all'aperto. Teneteli sempre lontano dalla cucina. Il troppo calore, in luoghi chiusi può essere spesso causa di malesseri.

Eruzioni cutanee. (Sfogo della pelle.) Se vedete dello sfogo sulla faccia e sul corpo del bambino, chiamate il medico. Non tutte le eruzioni cutanee sono causate dal calore. Lo sfogo potrebbe benissimo essere indizio di malattie gravi, quali la febbre scarlattina, il morbillo, il vaiuolo, la varicella.

Se desiderate con tanta ansia avere un bambino, perchè non allevarlo e mantenerlo come si deve? La metà dei casi di mortalità di neonati nella Pennsylvania potrebbero essere evitati se si seguissero i consigli ed i suggerimenti contenuti in questa circolare.

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Translated May 20, 1912.

Form 20 A—German.

Erhaltet die Säuglinge!

Regeln, welche bei der Pflege und Behandlung von kleinen Kindern während des Sommers befolgt werden sollten.

Das heiße Wetter dieser Jahreszeit ist äußerst gefährlich für das Leben von Säuglingen und kleinen Kindern, nicht nur wegen der niederdrückenden Wirkung hoher atmosphärischer Temperatur im allgemeinen, sondern mehr insbesondere wegen der Wirkung der heißen Witterung auf alle leicht verderbenden Nahrungsmittel, unter denen Kuhmilch den ersten Platz einnimmt.

Es ist deshalb überaus wichtig, daß Kuhmilch, welche zur Nahrung von kleinen Kindern gebraucht wird, so rein und frisch ist, wie man sie nur kaufen kann. Während des heißen Wetters ist Eis absolut nothwendig zur Erhaltung von Milch, und alle Milch, welche zur Nahrung verwendet wird, sollte durch Eis abgekühlt werden, sobald sie von der Kuh kommt, und in der Nähe von Eis gehalten werden, bis sie gebraucht wird. Ein wenig Geld das für Eis verausgabt wird, mag Krankheit verhüten und ihre viel größeren Kosten für Medizin, Pflege und ärztliche Behandlung. Da Wasser oft ein Krankheitsträger ist, so verfährt man am sichersten, nur gekochtes Wasser zum Trinken oder zur Zubereitung von Nahrung für den Säugling zu gebrauchen.

Die folgenden Regeln werden dazu helfen, die Säuglinge während des heißen Wetters zu erhalten:

Stillen an der Brust.—Jede Mutter sollte sich bestreben, ihr Kind zu säugen. Muttermilch ist die natürliche Nahrung für das neugeborene Kind. Keine andere Nahrung läßt sich damit vergleichen. Ein Kind, das an der Mutterbrust aufgezogen wird, hat eine bedeutend bessere Aussicht, zu leben, als ein Kind, welches an der Flasche aufgezogen ist.

Man gebe dem Kinde unmittelbar nach der Geburt keine künstliche Nahrung, während man auf das Kommen der Muttermilch wartet. Lege das Kind alle vier Stunden an die Brust und gib ihm weiter nichts als abgekochtes Wasser. Das Kind braucht nichts Anderes und wird keinen Hunger leiden. Wenn die Milch in der Brust kommt, säuge das Kind alle zwei Stunden während des Tages und zwei bis drei Mal während der Nacht.

Stille das Kind nicht jedesmal wenn es schreit, mäßiges Schreien fördert die Entwicklung der Lungen. Kinder, die unregelmäßig gestillt werden, oder jedes Mal wenn sie schreien, werden höchst wahrscheinlich Unverdaulichkeit bekommen und schreien dann nur noch heftiger infolge von Schmerzen. Stille das Kind regelmäßig, und es wird sich bald daran gewöhnen, die Nahrung nur in den rechten Zwischenräumen zu erwarten. Gib dem Kinde mehrere Male des Tages ein wenig abgekochtes Wasser.

Entwöhne das Kind nicht, so lange es zunimmt, und thue es nicht, außer auf ärztlichen Rath. Befolge in dieser Beziehung nicht den Rath von Freunden oder Nachbarn. Bleibt das Kind gesund, hört es aber nach einer gewissen Zeit auf, an Gewicht zuzunehmen, so glaube nicht, daß die Milch werthlos ist, sondern gel

gelbliche Farbe haben und nicht zu hart sein, so daß derselbe leicht abgeführt werden kann. Wenn der Stuhlgang eine grünliche Farbe annimmt, aber nicht häufiger als zwei- bis dreimal des Tages eintritt, so gib einen bis zwei Theelöffel Ricinusöl. Wenn sich die Farbe nicht bessert, nachdem das Öl gewirkt hat, so ziehe den Doktor zu Rathe. Zu dieser Zeit wird er im Stande sein, die ersten Darmbeschwerden zu verhüten, von denen das Kind bedroht ist. Wenn der Stuhlgang eine grüne Farbe behält und bis auf fünf oder sechs oder mehr Mal in 24 Stunden steigt, fängt das Kind an Darmstörungen oder Sommer-Diarrhöe zu bekommen. Höre sogleich mit Milch auf, gib anstatt dessen reines gekochtes Wasser und ziehe den Doktor zu Rathe. Es mag nicht zu spät sein.

Fange nicht wieder an, dem Kinde Milch zu geben, bis der Doktor es verordnet. Das Kind wird keinen Hunger leiden, wenn man aufhört, demselben Milch zu geben; jeder Tropfen Milch, welcher nach dieser Warnung in seinen Mund geht, vermehrt das Gift, welches bereits da ist. Ist der Stuhlgang los und grün in Farbe, so wird man durch Verabreichung von mehr Milch-Nahrung eine ernste oder verhängnißvolle Krankheit hervorrufen.

Erbrechen. — Ein Kind, welches an der Flasche aufgezogen wird, sollte sich nicht brechen, wenn die Nahrung rein und seinen Bedürfnissen in der rechten Weise angepasst ist. Wenn Erbrechen eintritt, so ist dies gewöhnlich ein Zeichen einer heran-nahenden gefährlichen Kinderkrankheit, oder von Sommer-Diarrhöe, wie es bei heißem Wetter mehr allgemein der Fall ist. Erbrechen, welches dieser Ursache zu Grunde liegt, mag das erste Zeichen von Störung sein und Stuhlgang mag nicht bis etliche Tage später eintreten. Wenn sich das Brechen wiederholt, stelle die Fütterung mit Milch ein, gib abgekochtes Wasser, kühl oder in der Temperatur, wie die Milch gegeben ist, und ziehe sogleich einen Arzt zu Rathe.

Kleidung. — Ziehe dem Kinde im Sommer nicht zu viele Kleider an. Entferne während des heißesten Wetters die meisten Kleider; ein dünnes loses Hemd und eine Windel genügen während des Tages und in sehr heißen, schwülen Nächten.

Gebrauche nie Kleider mit engen Leibchen. Unterröcke und Hemden sollten durch Träger über die Schultern gehalten werden.

Baden. — Bade das Kind jeden Tag. Bei heißem Wetter verschafft ein schnelles Abwaschen mit dem Schwamm später am Tage Linderung und fördert den Schlaf. Wasche das Kind jedes Mal wenn die Windeln gewechselt werden, und trockne die Theile vor dem Gebrauch von Pulver gründlich ab. Wasche alle beschmutzten Windeln und koche sie aus. Gebrauche nie eine getrocknete nasse Windel, ohne sie erst zu waschen.

Fliegen. — Sei vorsichtig, daß keine Fliegen in die Flasche und Nahrung des Kindes gelangen, auch lasse man dieselben nicht auf den Rippen des Kindes sitzen, wenn es schläft. Fliegen sind die Ueberträger zahlloser Krankheiten.

Frische Luft. — Frische Luft ist ebenso wichtig für die Gesundheit des Kindes, wie frische Nahrung. Halte das Kind während des Sommers so viel als möglich in der frischen Luft. Halte das Kind aus der Küche — es möchte vielleicht einen Sonnenstich infolge zu viel Hitze im Hause bekommen.

Hautauschlag. — Wenn das Kind einen Ausschlag oder Ausbruch der Haut bekommt, so ziehe einen Arzt zu Rathe. Glaube nicht, daß jeder Hautauschlag Hitzeblasen (prickly heat) sind; es mag eine gefährliche Krankheit sein, wie Scharlachfieber, Masern, Blattern oder Hühnerpocken.

Wenn es sich lohnt, ein Kind zu haben, so lohnt es sich auch dasselbe zu erhalten. Die Hälfte der Kinder, die jeden Sommer in Pennsylvanien sterben, könnten durch Befolgung der Rathschläge, welche in diesem Birkular ertheilt werden, gerettet werden.

Erlassen am 15. Mai 1909.

Uebersetzt am 1. Juni 1912.

STRZEZ SWE DZIECI.

REGULAMIN MAJĄCY BYĆ PRZESTRZEGANY PODCZAS MIESIĘCY LETNICH CEŁEM UCHRONIENIA DZIECI PRZED CHOROBAMI.

Gorące powietrze w tej porze roku jest najbardziej niebezpiecznem dla życia niemowląt i małych dzieci, nie tylko z przyczyny ociążałej i wysokiej atmosferycznej temperatury w ogólności, lecz więcej z wpływu jakie gorące powietrze wywiera na wszystkie pokarmy, które łatwo poddają się zepsuciu a między którymi krowie mleko zajmuje pierwsze miejsce.

Dlatego też jest bardzo ważne, ażeby krowie mleko, które ma być użyte za pokarm dla niemowląt, było najczystsze i najświeższe na jakie nas tylko stać.

Podczas upału lód jest koniecznie potrzebny do zakonserwowania mleka, a mleko przeznaczone na pokarm ma być lodem wystudzone zaraz po odebraniu od krowy i utrzymane zimno aż do przyrządzenia.

Mala suma pieniędzy wydana na lód może zapobiec, większemu wydatkowi na lekarstwa, opiekę i lekarza (lekarska opieka).

Z powodu iż woda jest często roznosicielką chorób, jest bezpieczniej używać tylko gotowanej wody do picia lub też przyrządzonego pokarmu do picia dla dziecka.

Następujące reguły pomogą do utrzymania zdrowia dzieci podczas upałów.

Karmienie piersią.—Każda matka powinna się starać aby karmić dziecko piersią.

Pokarm z piersi jest naturalnym dla nowonarodzonego dziecka.

Niema innego pokarmu któryby mógł być porównywany.

Dziecko karmione piersią ma większe szanse do życia.

Natychmiast po urodzeniu nie dać dziecku żadnego sztucznego pokarmu, nim nadejdzie pokarm piersi.

Przykładać dziecko do piersi co cztery godziny, a pić niczem innym tylko wodą przegotowaną.

Dziecku nie potrzeba nic więcej i ono z głodu nie umrze.

Gdy nadejdzie pokarm do piersi karmić dziecko co dwie godziny podczas dnia, a dwa lub trzy razy w nocy.

Nie karmić dziecka kiedy tylko zapłacze, umiarkowany płacz pomaga do rozszerzania płuc.

Dzieci karmione nieregularnie i kiedy tylko zapłaczą, podpadają niestrawności, a wtedy płaczą z bólu.

Karmić regularnie, a dziecko nauczy się spodziewać pokarmu tylko w oznaczonym czasie.

Dać dziecku pić trochę gotowanej wody kilka razy na dzień.

Gdy dziecko dojdzie do dwóch miesięcy, przedłużyć czas karmienia od 2½ do 3-ch godzin dziennie a tylko raz lub dwa razy na noc.

Nie odłączać dziecka od piersi gdy dziecko zyskuje a w każdym razie uczynić to za poradą lekarza.

Nie słuchaj porady sąsiadów lub przyjaciół w odłączeniu od piersi dziecka.

Jeżeli dziecko pozostaje zdrowe, ale po pewnym czasie nie zyskuje na wadze nie sądź iż pokarm twój nie jest pożytecznym ale poradź się lekarza, co do dodania jednej lub dwóch flaszeczek mleka celem wzmocnienia.

Karmienie flaszka.—Jeżeli koniecznie potrzeba dziecko karmić całkowicie lub częściowo flaszka, pamiętać należy aby zachować, jak największą czystość we wszystkich szczegółach.

Gdy tylko flaszka jest próżną, trzeba ją starannie wypłukać zimną wodą, a potem wymyć gorącą z buraksem (łyżeczkę boraksu do pół kwarty wody) i odłożyć na bok do dalszego czyszczenia zanim będzie znowu użyta.

Jeżeli ma się tylko parę flaszek i potrzeba użyć te same flaszki do następnego karmienia, trzeba ją przez kilka minut wygotować zanim się do niej świeży pokarm naleje.

Nigdy nie powawać dziecku resztek pokarmu w flasce jeżeli go przedtem nie spożyło.

Wziąć natychmiast flaszkę z kołyski, wylać mleko i wyczyścić odrazu flaszkę.

Zwietrzałe mleko zsiada się i lepi na wnętrzu flaszki a po upływie kilku godzin staje się trującym i może zanieczyścić świeże mleko.

Najlepiej mieć tyle flaszek ile się razy dziecko karmi dziennie, a wtedy można wszystkie razem wygotować zanim się przygotuje pokarm z rana.

Smoczki gumowe.—Czem prostszy smoczek tem bezpieczniejszy dla dziecka.

Nie używać zkomplikowanych smoczków a pod żadnym warunkiem nie kupować flaszki z długą gumową rurką przyczepioną do smoczka.

Takowa nie może być wyczyszczoną i napewno spowodzi zaburzenie żołądka.

Gdy flaszka wypróżniona smoczek ma być natychmiast zdjęty odwrócony na palcu i wyczyszczony w zimnej wodzie szczotką, tylko do tego przeznaczoną.

Po wyczyszczeniu potrzeba szczotkę zawsze gotować.

Oczyszczony smoczek umieścić w świeżej boraksowej wodzie (łyżeczk boraksu do pół kwarty wody) w zakrytej szklance.

Wypłukać smoczek w gorącej wodzie przed użyciem.

Nie wkładaj nigdy smoczka do swych ust aby się przekonać czy mleko jest dość ciepłe.

Spuść kilka kropel mleka na rękę, jeżeli mleko parzy wtedy jest za gorące dla dziecka.

Nie można podać szczegółowych przepisów dla przyrządzenia pokarmu dla dzieci.

Każde dziecko potrzebuje odmiany stosownej do jego strawności. Mieszanina na której jedno dziecko chowa się dobrze, może być za mocne lub też za słabe dla drugiego.

Niech lekarz osądzi jak przyrządzić pokarm.

Gdy śmietana jest potrzebną w przyrządzaniu, nie należy tejże kupować, gdyż może by starą, najlepiej zlać pół kwaterki z kwartowej butelki mleka po oczyszczeniu nakrywki z flaszki.

Nie zmieniać ciągle pokarmu dla dziecka jawo matki zwykle czynią, przez poradę dobrych sąsiadów.

Trzymać się przepisów lekarza.

Podczas lata pokarm dziecka powinien być przegotowany po przyrządzeniu.

Wlany w czyste flaszki, zakorkowany czystą pażoną bawełną i trzymany przy lodzie aż do użycia.

Nie grzać flaszki gdy się odchodzi spać i nie trzymać w łóżku aby nie wystygła, gdy się nie chce iść do lodowni i zagrzewać, gdy dziecko pokarmu potrzebuje, bo w ten sposób najpewniej można przyprowadzić chorobę dziecku.

Rozwolnienie żołądka.—Dziecko karmione flaską powinno mieć stolec przynajmniej raz na dzień a nie więcej jak dwa albo trzy.

Jeżeli mleko jest czyste i utrzymane czysto i zimno a wszystkie naczynia czyszczone w sposób przedtem podany.

Dziecka stolec powinien być austriackiego koloru i nie za twardy.

Jeżeli stolec zmienia się na (ajryski) kolor lecz nie powtarza się więcej jak dwa lub trzy razy dziennie, dać jedną lub dwie łyżeczki rycynowego oleju.

Gdy kolor się nie zmieni po użyciu oleju poradź się lekarza.

W tym czasie on będzie zdolny zapobiec poważnej chorobie kiszek zagrażającej dziecku.

Jeżeli stolec pozostaje zielonego koloru i częściej się powtarza, pięć lub sześć razy dziennie (na 24 godzin), twoje dziecko dostaje choroby letniej.

Zatrzymać mleko natychmiast a dać gotowaną wodę i zawołać doktora, a może nie będzie za późno.

Nie dać pokarmu mlecznego aż doktor pozwoli.

Dziecko się nie zagłodzi przez wstrzymanie mleka, a każda kropla mleka podana do ust dziecka po tym ostrzeżeniu tylko dodawałaby truciznę, już tam się znajdującą.

Byłaby to przyczyna poważnej lub fatalnej choroby przez danie mleka.

Przyczyniłabyś się do poważnej a może i fatalnej choroby dając dziecku mleko, za pokarm, może nastąpić rozwolnienie żołądka, a stolec byłby zielony.

Wymioty.—Dziecko karmione butelką nie powinno wymiotować, jeżeli pokarm jest czysty i należycie przyrządzony do potrzeb dziecka.

Jeżeli wymioty się zdarzą, to jest czysty objaw zbliżającej się choroby, może być, albo jedna z poważnych chorób dzieciennych, lub też więcej rozpowszechnionej w czasach gorączki letniej (diarrhea).

Wymioty z tej przyczyny mogą być pierwszą oznaką zaburzenia, rozwolnienie może nastąpić w kilka dni później.

Jeżeli wymioty się powtórzą, przestać karmić mlekiem, dać gotowaną wodę studzoną, lub tej samej temperatury co podawane mleko i poradzić się natychmiast doktora.

Ubranie.—Nie wkładać za wiele ubrania na dziecko podczas letnich miesięcy.

Podczas największej gorączki, zdjąć jak najwięcej sukieniek, a także tylko cienka i luźna koszulka i pieluszka zupełnie wystarczy podczas dnia, a także w bardzo gorące i duszne noce.

Nigdy nie używać ciasnego ubrania, spodniczki i sukienki powinny się zwieszać z ramion.

Kąpiel.—Kąpać dziecko codziennie.

Podczas wielkich upałów szybkie wycieranie całego ciała przy końcu dnia orzeźwi dziecko i pomoże mu spokojnie spać.

Umyć dziecko po zmianie każdej pieluchy, wytrzeć starannie przed użyciem proszku.

Prać zwalane pieluchy i wygotować je.

Nigdy nie zakładać suszonej pieluchy, wpierw potrzeba ją wyprać.

Muchy.—Zachować największą ostrożność aby muchy nie siadały na flaszce i pokarmie dziecka i nie pozwolić im usiąść na ustach dziecka podczas snu.

Muchy niosą zarazę tysiącom niemowląt co lato.

Świeże powietrze.—Świeże powietrze jest tak potrzebne ku zdrowiu dziecka jak zdrowy pokarm.

Podczas lata umieścić dziecko o ile możności na dworze.

Nie trzymać dziecka w kuchni, ono może także dostać udaru słonecznego z bytniego gorąca w domu.

Wyrzuty skórne.—Jeżeli dziecko ma wysepkę lub pęknięcie skóry, porad się lekarza.

Nie myśl, iż każdy wyrzut jest wysepką lub krostą z gorąca, może to być poważna choroba, jako szkarlatyna, odra lub ospa.

Jeżeli warto mieć dziecko, warto je też odpowiednio wychować.

Polowa dzieci, które umierają w Pensylwanii każdego lata, możnaby ocalić przez zachowanie powyższych rad podanych w tym cyrkularzu.

Wydane 15-go Maja 1909.

Przejrzane 1-go Czerwca 1912.

לעגט נישט אריין דאס נופעל אין אייער מיל אום אויסצוגעשניצן אויב די מילך איז גענוג ווארם. לזום ארומפאללען עטליכע טראפפען מילך אויף אייער האנד, און אויב איהר פיהלט צו הייס, איז עס צו הייס פאר דער בייבי'ס מיל.

קין אלגעמינע פארשריפט קען נישט אנגעגעבען ווערען פאר דער פארבערייטונג פון צוזאמען מיט שונג פון מילך פאר אייער בייבי. יעדע בייבי ברייכט א געוויסע קאמביניישען וועלכע זאל זיך צופאסען צו זיין פערזענלעכע. די מיסקטשור וועלכע זאל זיין גוט פאר איין אנדערער בייבי קען זיך ארויסצייגען צו שטארק אדער צו שוואך פאר אייער בייבי. זאל אייך דער דאקטאר זאגען ווי אזוי צו מישען די געהארגע. אויב עס איז גענוג צו געברויכען קריס אין דער מיסקטשור קומט נישט קיין קריס ווייל עס קען זיין פערדאגערט. נעמט ארויפער א האלבען פאונד פון דעם אויבערשטען פון א באפעל מילך, נאכדעם ווי איהר האט דאס באפעל גוט ארום געקליבט.

דורך דעם זומער זאל די בייבי'ס געהארגע געקאכט ווערען נאכדעם ווי עס ווערט פארבערייטעט. עס זאל דאן אריינגעגאסען ווערען אין די ריינע באפעלס, און גוט פערמאכט ווערען מיט ריין קאמאן-וואל און געהאלטען געבען אייז ביז צום געברויכען. ווארעמט נישט אן א באפעל בעפאר איהר געהט צום בעס און האלט עס נישט אין בעס ביז צו דער צייט ווען איהר ברייכט עס צו געבען דער בייבי, נור דאסיר ווייל איהר ווילט נישט געהען צום אייז פאקס און עס דערהארטען ווען די בייבי ברייכט עס. דאס קען זיכער מאכען די בייבי קראנק.

פאסען צו זיין. א בייבי וועלכע ווערט ערגערט דורך א באפעל זאל נישט מעהר ווי 8 אדער 8 מאהל א טאג געגען זיין. אויב די מילך איז ריין און איז געהאלטען געווארען קאלט און אלע גאה-רונגס געשיהרען געקליבט ווי עס איז אייך שוין געזאגט געווארען, זאל דער בייבי'ס ארויסגאנג זיין געלד אין קאליר, און זאל נישט זיין צו הארץ און לייכט צום ארויסגאנג. אויב דער ארויסגאנג ווערט גרינג-ליך אין קאליר, אבער נישט מעהר ווי 2 אדער 3 מאהל א טאג, נישט 2 אדער 3 טהעעלעפעל קאסטאר טייל. אויב דאס קאליר פערבעסערט זיך נישט, נאכדעם ווי דער טייל האט געמאכט זיין ווירקונג, בעראטט זיך מיט אייער דאקטאר. צו דיעזער צייט וועט ער קענען פערמיינען די געפערליכסטע טראפפעלס אין וועלכע די בייבי איז אין געזאגט. אויב דער ארויסגאנג בלייבט גריין אין קאליר און פערגרעסערט זיך אין צאהל פון 5, 6 אבער מעהר מאהל אין 24 שטונדען, פאנגט אייער בייבי אן צו האבען בויך טראפפעל אדער זומער אבוייכען. סאפט וואפארט געבען מילך און נישט ריינע געוואסענע וואסער, און רופט א דאקטאר, עס איז מעגליך אז עס איז נישט צו שפעט.

פאנגט נישט אן צו געבען נאך א מאהל ביז דער דאקטאר הייסט אייך. איהר וועט נישט אויסהאנגען ריין אייער בייבי דאמיט וואס איהר וועט סטאפען די מילך. יעדער טראפפען מילך וואס געהט אריין אין זיין מיל נאך דיעזער ווארונג פערגרעסערט די גיפט וועלכע געפינט זיך שוין דאָרט. איהר וועט פער-אורזאכען ערנסטע אדער געפערליכע קראנקהייטען אויב איהר וועט ווייטער געבען מילך נאכדעם ווי דער ארויסגאנג ווערט לויז און גריין אין קאליר.

ברעכען. א בייבי וועלכע ווערט ערגערט דורך א באפעל וועט נישט ברעכען אויב די געהארגע איז ריין און ריכטיג צוגעפאסט צו די בעדרייטעס. אויב עס קומט פאר ברעכען איז עס א צייכען אז קראנקהייט דערנענטערט זיך, אדער איינע פון די ערנסטע קראנקהייטען פון קינדערייט, אדער, וואס איז מעהר געוועהנליך אין הייסען וועטער, זומער אבוייכען. דאס ברעכען וועלכעס קומט פאר דורך דיעזער אורזאכע איז דער ערשטער צייכען פון טראפפעל, און דער ארויסגאנג ווערט דערפאר נישט לויז ביז אין עטליכע טעג שפעטער. אויב דאס ברעכען קומט נאך א מאהל פאר, סאפט געבען מילך, נישט געקאכטע וואסער, קיחלע אדער עס זאל האבען די זעלבע פעמפערטאט ווי די מילך וועלכע ווערט געגעבען, און בעראטט זיך וואפארט מיט אייער דאקטאר.

קליידונג. לעגט נישט ארויף צו פיעל קליידער אויף דער בייבי אין זומער, אין די הייסע וועטערען נעמט אַוועק די מיינסטע פון די קליידער; א דין לויז העמדעל און א דאָפער איז גענוג איבערן טאג און אין א זעהר הייסע נאכט.

קין מאהל זאלט איהר נישט געברויכען קיין קליידער מיט ענגע ווייסע בענדס, פעטיקאוסט און סקירטס זאלען זיין אונטערגעהאלטען מיט סטרעפט איבער די אקסלען.

באדען. באדעט די בייבי יעדען טאג. אין הייסען וועטער, נישט איהם שנעלע ספאנדזשינג וואסערן גאנצען קערפער, שפעטער דורכ'ן טאג וועט עס דער בייבי ערפרישען און מאכען שלאפען פאסטער. וואס די בייבי יעדעס מאהל ווען איהר געברויכט דעם דאָפער און טריקענט אָפּ די נאָסע פאסטער פון קערפער בעפאר איהר געברויכט דעם פאדער. וואס אלע געפליקטע דאָפערס און קאכט זיין מאהל זאלט איהר נישט געברויכען א אויסגעטריקענען דאָפער בעפאר איהר וואס איהם אויס. פרישע לופט. פרישע לופט איז אזוי וויכטיג פאר דער בייבי'ס געזונד ווי פריש שטיוז. וועהרענד דעם זומער האלט די בייבי אויסער דעם הויז ווי פיעל מעגליך. האלט נישט די בייבי אין קיטשען. עס קען קראנק א, זאגנשטיך פון צו פיעל אינסידירגע ווארם.

אויסשלאגע פון דער הייט. אויב די בייבי האט אן אויסשלאג אויף דער הייט, בעראטט זיך מיט דאקטאר. דענקט נישט אז יעדער אויסשלאג איז פון הייס; עס קען זיין אן ערנסטע קראנקהייט ווי סקארלעט פיער, מוחלען, סטאל פאקס אדער משיקען פאקס.

פליעגען. הייט פארזיכטיג אויסצומיינען פליעגען פון דער בייבי'ס באפעל און שטיוז, און ער-לויבט זי נישט ווי זאלען שמעקען אויף דער בייבי'ס ליפען וועהרענד עס שלאפט. פליעגען פערשלעפען קראנקהייטען צו טויערדער קינדער יעדען זומער.

אויב עס איז ווערטה צו האבע א בייבי, איז עס ווערטה דאס זעלבע צו רעטען. האלט זיך פון קראנקע וועלכע שטארבען אין פענסילוויניא וואלטען געקענט גערעטעט ווערען אויב מען זאל פאזשען דעם ראטה וועלכער ווערט געגעבען אין דיעזען צירקולאר.

סעמועל דזש. דיקסאן.

príčinu toho, akoby mlieko Vaše nebolo viac dobré ale poraďte sa s lekárom, či nemáte si pribrat' jednu lebo dve fľašky na výpomoc.

Zivenie fľaškou.—Ak sa stane potrebným, krmit' nemluvňa úplne lebo čiastočne fľaškou, pamätajte, že pri takomto živení je potrebná čistota vo všetkých podrobnostiach. Akonáhle sa fľaška vyprázdni, vypláchnite ju studenou vodou, za tým vymyte ju horúcou vodou a boraxom (1 čajová lyžka do 1 pajntky vody) a odložte ju k ďalšiemu vymytiu. Ak máte len málo flášiek a stane sa potrebným použiť tú istú fľašku k nasledujúcemu kojeniu, dajte ju na niekoľko minút do vriacej vody a len potom naplňte ju čerstvou. Nikdy nedajte diet'at'u požívať pozostatky z fľašky, ktorú ono nevyprázdnilo naraz. Vezmite fľašku z kolísky, vylejte z nej pozostalé mlieko a vyčistite ju bezodkladne. Tvarôžky zo starého mlieka, nalepené na vnútorných stenách fľašky stanú sa po niekoľko hodinách jedovatými a môžu zanečistiť čerstvé mlieko, akonáhle s týmto prídu do styku. Je lepšie mať tol'ko flášiek, kol'ko razy dávame diet'at'u denne potravu. Takže všetky fľašky môžu byť každé ráno pred pripravením potravy spolu vyvarené.

Cmúľky.—Čím jednoduchší je cmúlok, tým bezpečnejší je pre nemluvňa. Neužívajte komplikovaných cmúlkov a za žiadných okolností nekupujte fľašku s dlhou ku cmúľku pripojenou gummovou rúrkou. Taká fľaška nemôže byť udržiavaná v čistote a iste zapríčiní brušné nesnádze. Akonáhle je fľaška vyprázdnená, cmúlok má byť ihneď odstránený, obráťte ho rubom na palci, ošuchajte kefkou namočenou v studenej vode. Kefka táto má byť držaná jedine k tomuto účelu. Po použití vyvarujte kefkou v horúcej vode.

Vyčistený cmúlok má byť držaný v čerstvej boraxovej vode (1 čajová lyžka boraxu do 1 pajntky vody) v zakrytom pohári. Vypláchnite cmúlok vo vriacej vode pred každým použitím.

Neberte cmúlok do svojich úst za účelom, aby ste sa presvedčili, či je mlieko dost' teplé. Nechajte padnúť niekoľko kvapôk mlieka na svoje zápästie, ako pocítite, že je veľmi horúce na zápästí, je veľmi horúce pre ústočká decka.

Pre prípravu mliečnej miešanky pre diet'a neplatia žiadne všeobecné pravidlá. Každé diet'a potrebuje složku primeranú jeho záživnosti. Složka, ktorá je dobrá pre druhé dieta, môže byť prisilnou lebo prislabou pre Vaše decko. Poraďte sa preto lekára, ako máte pripraviť pokrm. Ak je potrebná smotánka, nekupujte túto—bude pravdepodobne stará—ale získajte si ju tak, že slejete asi polpajntky s vrchu kvartovej fľašky mlieka, ale prv očistite okraj fľašky.

Neprehrešte sa stálym menením potravy pre decko, ako to zvyčajne matky rady robievajú na radu "dobrých" susedov. Nasledujte úpravy svojho lekára.

V lete pokrm pre nemluvňa po jeho pripravení má byť prinesený do stavu oparenia. Potom nech sa vleje do čistých flášiek, tieto zapchajú sa suchou bavlnou a držia sa pri l'ade až do času použitia.

Nesohrievajte fľašku, keď idete do postele, a nedržte ju v posteli, kým nepríde čas kojenia, pretože sa Vám nechce ísť po ňu do skrine s l'adom a sohrievať ju, kedy nemluvňa ju potrebuje. Toto je istý spôsob urobiť diet'a chorým.

Stolica.—Fľaškou krmené diet'a má mať raz a nie viac ako dva lebo trirazy denne stolicu. Ak mlieko je čisté pri začiatku, držané bolo v chlade a všetky nádoby sú čisté, ako Vám o tom hore bolo pove-

dané, stolica diet'at'a má byť žltej barvy, nie veľmi tvrdá, aby snadno vyšla. Ak stolica stane sa zelenkavou, ale nie častejšou, ako dva lebo tri razy denne, dajte decku jednu lebo dve čajové lyžky kastorového oleja. Ak barva stolice po tomto sa nezlepší, poraďte sa s lekárom. V tomto čase lekár bude ešte v stave zabrániť vážnejšej brušnej nemoci, ktorá diet'at'u hrozí. Ak barva stolice zostáva i ďalej zelenou a diet'a ide na stolicu častejšie, päť, šesť lebo i viac razy v behu 24 hodín, diet'a Vaše dostáva brušnú nesnáz, alebo letnú nemoc. Zastavte mlieko doraz a miesto neho dávajte diet'at'u prevarenú čistú vodu a povolajte lekára. Možno, nebude ešte neskoro.

Nezačnite krmiť s mliekom prv, kým Vám tak nenarídi lekár. Zastavením mlieka neublížite diet'at'u: každá kvapka mlieka, ktorá sa po tejto výstrahe dostane do úst nemluvňat'a mení sa na jed a zhoršuje stav diet'at'a. Zapríčinite vážnu ba aj osudnú nemoc, ak i ďalej budete dávať decku mlieko potom, keď črevá stanú sa voľnými a stolica barvy zelenej.

Dávenie.—Fľaškou krmené nemluvňa nemalo by dávať, ak potrava jeho je čistá a primerane pripravená k jeho potrebám. Ak nastane dávenie, je to dlhá vŕtka predzvest' blížiacej sa choroby, lebo jednej z tých vážnejších detských nemoci, lebo nemoci takzvanej letnej, ktorá v horúcom období je častou. Dávenie z tejto príčiny môže byť prvým znakom nesnáz a črevá nestanú sa voľnejšími len po niekoľko dní. Ak dávenie sa opakuje, zastavte dávať diet'at'u mlieko, dávajte mu prevarenú vodu, studenú alebo takej teploty, v akej my bolo dávané mlieko a poraďte sa bezodkladne s lekárom.

Odev.—Nedávajte mnoho šiat na nemluvňa v lete. Počas najhorúcejšej povetnosti, odstraňte s neho väčšinu šatočiek; tenká voľná košielka a plienka postačí vo veľmi horúcich dňoch a veľmi horúcich nociach.

Nikdy neužívajte šiat s úzkymi pásy. Košielky a sukničky so strapcami na ramenách sa odporúčajú.

Kúpanie.—Kúpajte diťa každý deň. V horúcom počasí v tieni nemluvňat'a s mokrú špongiou. To ho osvieži a bude lepšie spať. Umyte diťa za každým, keď mu dávate druhú plienku a usušte najprv dobre časť tela, ktorú posypete prachom. Vyperte zanečistené plienky. Nikdy neužívajte usušenú zanečistenú plienku, kým ju prv nevyperiete.

Muchy.—Dávajte pozor, aby muchy nesadali na fľašku dieťat'a a jeho potravu, tiež aby nesadali na rty nemluvňat'a, keď toto spí. Muchy prinášajú tisícim a tisícim nemluvňatám nemoc každé leto.

Čerstvé povetrie.—Čerstvé povetrie je práve tak dôležitým pre zdravie nemluvňat'a, ako čerstvá potrava. V lete držte diťa nakoľko možno vonka. Nezdružujte sa s deckom v kuchyni — môže dostať "slnečný úpal" od veľkej horúčosti dnu.

Kožné vyrážky.—Ak diťa má vyrážku alebo pukliny kožné, poraďte sa s lekárom. Nemyslite si, že každá červená škvrna je ničím iným, ako vypretinou, môže to byť príznakom vážnej nemoci, jako šarlach, záškrt, kiahne malé alebo ovčie.

Ak hodné je mat' diťa, je hodno ho zachrániť. Polovica detí, ktoré zomrú v Pensylvánii každé leto, mohla byť zachránená nasledovaním rád v tomto obežníku.

Vydaný 15. mája, 1909.

Opravený 1. júna, 1912.

[Issued by Providence (R. I.) Health Department.]

GENERAL DIRECTIONS FOR FEEDING YOUNG CHILDREN.

[These directions are not intended to take the place of the family physician. Always consult your doctor in regard to the feeding of your child.]

From 12 to 15 months.—Accustom the child to drink from cup and take food from a spoon. Five meals should be given in 24 hours.

Breakfast.—Cup of cow's milk, a saucer of oatmeal or barley-flour jelly, with milk, or cream of wheat with milk. The oatmeal jelly is made by putting two-thirds of a cup of rolled oats and 1 teaspoonful of salt into 3 cups of boiling water. Let it boil 2 minutes, then cook over hot water for 4 hours. Strain. What goes through is oatmeal jelly, and may be kept in a cool place. Make a fresh supply every day. Milk may be warmed to suit taste; it should not be iced.

Forenoon lunch.—Cup of cow's milk.

Dinner.—Broth or beef juice, bread a day old crumbed in milk.

Afternoon lunch.—Cup of milk.

Supper.—Bread crumbed in milk.

If possible, give two to four tablespoons of orange juice or other fruit juice in season before morning lunch. Be sure the fruit is sound and ripe. Do not give fruit juice at same time as milk.

Water may be given as desired, but sparingly at meals.

From 15 to 18 months.—*Breakfast.*—Cup of cow's milk, saucer of oatmeal jelly with milk, or flour or Indian meal gruel, with milk, small piece of bread a day old with butter.

Forenoon lunch.—Cup of milk, small piece of bread and butter.

Dinner.—Broth or beef juice with boiled rice or barley, and a small piece of bread and butter.

Afternoon lunch.—Cup of milk.

Supper.—Cup of milk, bread a day old and butter, a little apple sauce or pulp of stewed prunes or baked apples with skin and seeds removed.

Water may be given as desired, but sparingly at meals.

From 18 months to 2 years.—*Breakfast.*—Cereal and milk. Cup of milk. Bread a day old and butter.

Lunch.—Cup of milk with bread and butter or simple crackers, or Indian-meal johnny cakes and milk, or corn bread and milk.

Dinner.—Broth with boiled rice or barley, or eggs, soft boiled or poached, baked or mashed potatoes with butter and salt, bread and butter.

Afternoon lunch.—Piece of bread and butter.

Supper.—Milk, bread and butter, or milk toast, pulp of baked apple, apple sauce, stewed prunes or ripe fruit according to season.

Water may be given as desired, but sparingly at meals.

From 2 to 3 years.—Additions to the diet must be gradually made by selecting articles from the list below, always giving small portions at first, and never trying two new articles at one meal. All food must be finely cut or mashed, and well chewed.

Select from the following articles: Milk, eggs, soft boiled, poached or scrambled, or mutton or lamb chops, baked or mashed potatoes, young peas or beans, scraped beef, white meat of chicken, boiled fish, oatmeal, hominy, wheat-germ, cream of wheat (all these cereals being thoroughly cooked); broths and soups; white and graham bread a day old, toast, zwiebach, plain crackers, milk toast, junket, plain custard, corn-starch pudding, bread pudding, blanc mange, ice cream, rice pudding; oranges, baked apples, apple sauce, stewed prunes, and pulp of peaches and pears if ripe and sound.

From 3 to 6 years.—From 3 to 6 years select in addition from the following articles: Beef steak, roast lamb, stew of mutton or beef, hash of mutton, beef or fish; bacon, mutton or lamb chop, corned beef; baked beans, string beans, spinach, asparagus, summer or winter squash, beets, tapioca pudding, molasses ginger bread, sugar or molasses cookies, grapes (with seeds and skin removed), ripe bananas (not more than 1 in one day), melons.

During the 3 to 6 years four meals should be given at regular intervals, as 7 a. m., 10.30 a. m. (a smaller meal than the other three), 1.30 p. m. and 5. p. m.

The following is suitable for a child of 4 years:

Breakfast.—Half an orange, two tablespoonfuls of cereal with milk and sugar or salt, glass of milk, bread and butter.

Forenoon lunch.—Glass of milk or cup of broth, bread and butter or crackers.

Dinner.—Two tablespoonfuls of stewed meat finely cut, tablespoonful of baked potato with butter and salt, a tablespoonful of green peas well mashed, bread and butter, a cup custard.

Supper.—Milk, bread and butter, cooked fruit.

Do not give articles on the following list till the child is 4 years or older:

Fried meats and vegetables, tomatoes, carrots, turnips, egg plant, or green corn, hot bread or hot rolls, buckwheat or other griddle cakes, fruit cakes, candy, and nuts.

Never give children wine, beer, or cider.

Do not give celery, cucumbers, lettuce, radishes, cabbage, onions, or pies, tarts, doughnuts, tea, or coffee until the child is 7 years old. Tea and coffee should even then be weak.

When children are constipated, do not dose them with medicines but consult a physician. If children over 2 years of age are constipated give them more vegetables, ripe fruit, stewed prunes, oatmeal, molasses gingerbread, rye mush and molasses, rye bread and graham bread. Avoid wheat bread and crackers.

PROVIDENCE, May, 1911.

COMMENT PRENDRE SOIN DES BÉBÉS.

POUR CONSERVER UN BÉBÉ EN BONNE SANTÉ.

1. Donnez à l'enfant de l'air pur et le jour et la nuit.
2. Ne lui donnez d'autre aliment que le lait de sa nourrice, le biberon ou autre nourriture d'après ordonnance du médecin.
3. S'il pleure, s'il est agité ou nerveux, ne lui offrez que de l'eau.
4. Donnez-lui suffisamment de sommeil, qu'il dorme au moins deux fois par jour.
5. Ne le surchargez pas trop d'habits.
6. Baignez-le tous les jours.
7. Laissez-le seul et tranquille.

COMMENT PRENDRE SOIN DES BÉBÉS PENDANT LES CHALEURS.

Pour prévenir la diarrhée, la maladie, la mort, le Bureau de Santé prescrit les règles suivantes :

Air.—Que l'enfant dorme ou non, il a besoin d'air pur et le jour et la nuit. Ne permettez pas au bébé de stationner dans une chambre fermée, ni dans un appartement où se fait cuisine ou lavage. Faites le sortir à une heure matinale, évitez que le soleil lui donne dans les yeux. Gardez-le dehors durant les nuits très chaudes.

Veillez à la propreté et au bon air de la maison. En temps chaud ouvrez portes et fenêtres tant la nuit que le jour. Ayez toujours une fenêtre ouverte dans la chambre.

Nourriture et eau—*Excès de nourriture : Diarrhée.*—Autant que faire se peut, chaque mère doit allaiter son enfant ; la meilleure nourriture pour un enfant au-dessous d'un an est le lait de sa mère.

Une des principales causes de maladie chez les jeunes enfants provient de l'excès de nourriture, ce qui très souvent occasionne la diarrhée, les maladies de langueur et parfois la mort. La diarrhée ne provient pas de la dentition mais plutôt de l'excès de nourriture, de nourriture trop fréquente, du manque d'eau à boire, du manque de sommeil, ou de ce que l'enfant soit manié trop souvent.

Heures pour allaiter.—Le moyen d'éviter la diarrhée et la maladie est de nourrir l'enfant à la mamelle et de le nourrir très régulièrement.

Règles pour nourrir l'enfant suivant l'âge.—Depuis la naissance et pendant les deux ou trois mois consécutifs, allaiter l'enfant toutes les deux heures. A partir de deux mois et demi jusqu'à cinq, l'allaiter toutes les deux heures et demie. A dater de six mois jusqu'à douze, toutes les trois heures seulement. Ces règles doivent être observées pendant la journée, depuis six heures du matin jusqu'à six heures du

soir. L'enfant ne doit pas être allaité plus de deux fois pendant la nuit. Eveillez l'enfant régulièrement pour le nourrir durant le jour, mais non pas entre dix heures du soir et six heures du matin.

Quand l'enfant est élevé à la mamelle laissez-le se satisfaire, quand il en a pris suffisamment faites-le attendre jusqu'à l'heure réglementaire pour l'allaitement suivant. S'il pleure ou s'il est nerveux, impatient, donnez-lui de l'eau froide, bien pure, sans mélange ni addition de sucre ou d'autre chose.

Sevrage.—Ne sevrer jamais un enfant au commencement de l'été. En le sevrant donnez-lui du lait de vache dilué, une fois le jour d'abord, puis d'avantage jusqu'à sevrage complet.

Enfants élevés au biberon.—La meilleure nourriture pour un enfant élevé au biberon est le lait de vache, frais et non écrémé, préparé d'après prescriptions du médecin. Ce lait ne doit jamais être servi à un enfant très jeune sans être mélangé d'une certaine quantité d'eau. Ne donnez jamais à l'enfant de lait condensé, ni pain, viande, pommes de terre, bonbons ou autre chose analogue sans l'avis du docteur.

Conservation du lait.—Le lait destiné aux enfants ne doit pas subir le contact de l'air, mettez-le dans un endroit frais, autrement il s'aigrirait et rend l'enfant malade. En été munissez-vous de glace, si faire se peut, et autant que possible maintenez-y le lait, ou à proximité. A défaut de glace entourez l'ustensile contenant le lait d'un linge bien imbibé d'eau froide. Les enfants au biberon devront être nourris aussi régulièrement que ceux à la mamelle.

Nettoyage des biberons.—Servez-vous d'une brosse pour nettoyer les biberons, rincez-les d'abord à l'eau froide, ensuite à l'eau chaude contenant du soda, rincez-les plusieurs fois, ensuite emplissez les biberons d'eau en y ajoutant encore une pincée de soda, laissez-y l'eau jusqu'au moment de se servir du biberon. Ne laissez jamais le lait y séjourner, ne vous servez pas de biberon à long tube.

Tétines.—Ayez au moins deux nipples. Quand l'enfant a été nourri et que le biberon est lavé, retournez le nipple, lavez-le dans de l'eau chaude, maintenez-le ensuite dans un bol d'eau de soda jusqu'à nouvel usage. Veillez à ce que l'enfant ne prenne pas sa nourriture trop vite, des vomissements pourraient se produire.

Sommeil—Lit.—Ne faites jamais servir à l'enfant un oreiller de plumes, ne le couchez pas non plus sur un lit recouvert de caoutchouc ou de toile cirée; un tel lit chauffe le dos et la tête de l'enfant et le rend susceptible de prendre froid quand il se lève.

Le meilleur lit pour un enfant est celui d'excelsior recouvert de mousseline (cheese cloth). Cet excelsior se vend dans tout magasin à quelques cents le sac et le prix de la mousseline est de trois ou quatre cents la verge. Ce genre de lit est toujours propre, frais et confortable, il contribue à fortifier l'enfant et le préserver de la toux et des refroidissements. Vu son prix peu dispendieux, si ce lit se trouve sali ou taché, matelas et excelsior se renouvelle à peu de frais. Ce mode de lit est spécialement recommandé en été pour des enfants malades.

Ne berce pas l'enfant.—Habituez de bonne heure l'enfant à s'endormir sans être bercé. Veillez à ce qu'il sommeille dans la matinée et l'après-midi et cela sans lui faire prendre la mamelle ou le biberon.

Pleurs.—Très souvent les enfants pleurent quand on les couche; laissez-les tranquilles sans leur parler, ni les manier, leurs pleurs cesseront pour faire place au sommeil. Laissez l'enfant crier un peu, ses poumons s'en trouvent mieux et ces cris ne nuisent nullement à l'enfant.

Laissez l'enfant seul et tranquille.—Quand l'enfant est éveillé ne le tenez pas toujours dans vos bras ou sur les genoux; le faire passer d'un bras dans un autre et d'une personne à une autre, le rend de mauvaise humeur, nerveux et malade. L'enfant aimé à jouer seul, par conséquent laissez-le livrer à lui-même, que quelqu'un l'observe et le surveille mais ne le manie pas incessamment.

Vêtements.—Ne surchargez pas l'enfant de vêtements pendant les chaleurs surtout, il ne doit porter ni bandes, ni ceinture piquée. Excepté le cas où l'enfant serait très délicat, son habillement doit consister en une chemise, un jupon, une robe en coton et une serviette ou couche. Les serviettes soient en "diaper cloth" ou coton flanelle et non en laine ou caoutchouc. Les serviettes devront être changées aussitôt mouillées et immédiatement lavées à l'eau chaude. Après chaque selle, l'enfant devra être bien lavé; il arrive assez souvent qu'il soit écorché, et cela, soit parce qu'il n'est pas bien lavé, soit parce que la poudre est appliquée avant entière propreté, soit encore parce que les couches ne sont pas lavées mais seulement séchées et usagées de nouveau.

Bain.—Le bébé doit être baigné à heure fixe tous les matins, la température de l'eau sera de deux degrés plus élevée que celle de l'enfant. Faites l'essai de cette eau sur votre figure afin de vous convaincre qu'elle n'est pas trop chaude. Servez-vous du savon "Ivory" ou "Castile."

Règles pour enfants malades.—Si l'enfant est indisposé pendant les chaleurs, déshabillez-le à l'exception de la serviette et revêtez-le d'une robe de nuit. S'il est fiévreux et brûlant, appliquez-lui plusieurs compresses d'eau froide, laissant l'eau s'évaporer, ce qui diminuera sa température. Faites lui boire de l'eau froide si possible. S'il vomit, ce qui arrive souvent, ne lui faites prendre ni nourriture, ni remède; donnez-lui une cuillerée à thé d'eau de chaux toutes les heures jusqu'à l'arrivée du médecin. S'il souffre de convulsions, donnez-lui un bain chaud, faites couler de l'eau froide sur sa tête, administrez-lui ensuite une injection de savon et d'eau.

N'arrêtez pas les vomissements en lui faisant prendre aucun thé ou cordial; vomissements et diarrhée sont les suites d'une indigestion, il faut qu'il s'en débarrasse.

SUMMER CARE OF BABIES.

The proper food for babies is mother's milk.

Nurse your baby, if possible.—Ten bottle-fed babies die to one that is breast-fed.

Nurse the baby regularly at certain hours, and not every time it cries. Once in two or three hours is often enough to nurse it until it is 4 or 5 weeks old; after that not so often. Nurse the baby until it is 8 or 9 months old. Do not wean your baby during the hot weather.

Many infants are killed every year by bringing them to the table with the family and giving them food for which the little stomachs are not fitted. While you nurse your baby do not give it a morsel of solid food or give it either tea, coffee, or beer. Wait until the baby gets teeth before giving food which needs to be chewed.

If breast milk fails, feed your baby cow's milk from a clean bottle.

Bottle-fed babies must be given only good milk, which is kept constantly covered and on ice. If the milk can not be kept properly covered, it should be boiled as soon as received.

To keep milk sweet for your baby, put the milk which the baby will need during the next 24 hours in a bottle with tight cork or a glass jar having tight cover. The bottle or jar and the cover must be boiled before the milk is poured in. Set a pan of cold water on the stove. Put in vessel, with top loosely screwed on, containing baby's milk. When water boils take out the vessel with baby's milk, open, add a little less than one-half teaspoonful of baking soda to one quart of milk. Put back the cover of the vessel. Do not allow anyone to touch the milk unless using it for the baby.

Don't overfeed the baby.—A newborn baby's stomach will hold from two to three tablespoonsful, and not more than this amount; rather less should be given at a time during the first week or so of a bottle-fed baby's life. As the baby grows the quantity should be gradually increased, so that at the end of the first month it may be taking about four tablespoonsful at a meal. Some children will require more, and others will not stand so much, but there is more danger of giving too much at a time than too little.

Weigh the baby each week.—A healthy baby should gain a pound a week at this period of life. If your baby does not gain this, consult your doctor about the food to be given and be guided by his advice.

If the baby cries, remember that if it has been fed regularly it is not crying from hunger.

It may be thirsty.

It may have colic.

See that its hands and feet are warm.

That it is not too hot (sweating).

That its diaper is soft, clean, and dry.

That no pins are wounding it.

To prepare milk for baby's meal.—To each cup of milk add two cups of water and white sugar (sometimes sugar of milk is better), enough to make it as sweet as breast milk. Pour it into bottle. Heat this milk until it is as warm as breast milk. Put rubber nipple on bottle.

Don't feed a baby under 6 months of age with a spoon.—Sucking is the natural way by which a baby takes its food. It needs the sucking action of the lips and mouth and tongue to mix its foods with the fluids of the mouth and for the proper development of the mouth and teeth.

Don't use a tube on the bottle.—Use a nipple.

Don't forget to wash bottle and nipple after using.—Babies often get "sore mouth," "wind colic," and "summer complaint" from a want of care of the nursing bottle.

Cleanse the bottle immediately after feeding.

Cleanse the nipple thoroughly outside and inside. Nipples with tubes are convenient for a lazy mother, but mean death to the baby.

To prepare barley water for the baby.—When the baby is 4 or 5 weeks old, barley water should be used in the place of plain water. Put two tablespoonsful of pearl barley into four cups of cold water; boil an hour or more until the amount of water is reduced to two cups; then strain through a clean cloth; add a pinch of salt and sweeten to breast-milk taste. Add this to a cup of scalded cow's milk, as before described, and begin feeding this strength. Use more cow's milk gradually and less barley water until at about 6 months of age the child is getting two-thirds milk and one-third barley water. This will make as good food as the baby can get during teething and weaning. After this time then one can use pure milk, scalded as before; bread and milk; rice and milk; baked potatoes and milk; oatmeal porridge (well cooked) and milk (the milk always to be scalded, not boiled). No other foods are necessary, except those mentioned above.

Bathing.—Keep the baby clean and it will stand the heat better. It should have at least one full bath every day, and oftener during extreme heat. Never bathe the baby within an hour after feeding it. Bathe first; feed afterwards.

Clothing and fresh air.—Dress as lightly as possible in hot weather. Keep the baby in the open air out of the hot sun. At night keep the windows open, but have them screened, and keep out the flies. When the weather turns suddenly cool care must be taken to avoid chilling. A thin, soft, flannel binder wound two or three times around the body should be worn. This binder should be only wide enough to cover the belly, and should be wound smooth and free from creases or folds and fitted with a few stitches of soft darning cotton; no pins.

Do not let the baby sleep in the same bed with any other person.—If there is no crib, the mother should put a couple of chairs at her bedside, with a soft covering on them, and let the baby sleep there. It will be more comfortable on a summer night than lying against the hot body of its mother and will not be so apt to disturb others or to be disturbed. The backs of the chairs will keep the baby from falling, and the mother can readily reach over to care for it when necessary.

If the baby vomits, has a diarrhea, or seems sick, stop all milk and give nothing but warm water in the nursing bottle, and send for the doctor.

ריוניגט גוט אויס דעם נישטעל אינוועניג און אויסענוועניג. נישטעלס און רעהרען זיינען בעקוועם פיר א פוילע מוסער, אבער זיי מיינען טויט פיר די בייבי.

ווי מען פארבערייטעט בארליי-וואסער פיר די בייבי.
פיר א בייבי פון פיער אדער פינף וואכען דארף מען געברויכען בארליי-וואסער אנשטאט פליינע וואסער. שייט אריין צוויי טהע-עלעפעלעך פערל בארליי אין פיער קאפעס קאלטע וואסער; לאזט עס קאכען א שטונדע אדער מעהר ביז עס בלייבט נור צוויי קאפעס וואסער. דאן זייט עס דורך א ריינעם ליינענעם; גיט צו א שמעק זאלץ און מאכט עס זיס, עס זאל האבען דעם געשמאק פון ברוסט מילך. גיט עס צו א קאפע געבריהטע קוח מילך, ווי אויבען בעשריבען, און הויבט אן ערנעהרען ביי דיעזער שטארקייט. שטופענוויין געברויכט מעהר קוח מילך און וועניגער בארליי-וואסער, זאג דאס אונגעפעהר צו זעקס מאנאט זאל דאס קינד בעקומען צוויי דריטעל מילך און איין דריטעל בארליי וואסער. דיעזעס וועט אויסמאכען אזא גוטע נאהרונג ווי א בייבי קען נור בעקומען וועהרענד עס מאכט די צויהנער און ביים ענטוועהנען. נאך דיעזער צייט קען מען געברויכען ריינע געבריהטע מילך, ווי אויבען געזאגט; ברויט און מילך; רייז און מילך; געבראמענע קארטאפעל און מילך; אויטמיל זופ (גוט אויסגעקאכט) און מילך (די מילך מוז שטענדיג זיין געבריהט און גיט געקאכט). קיינע אנדערע שפייזע אויסער די וועלכע זיינען אויבען, דערמאנט געווארען זיינען נויטיג.

ב א ד ע ן. האלט די בייבי ריין און ער וועט בעסער קענען פערטראגען די היטץ. ער דארף האבען וועניגסטענס איין באד יעדען טאג, און עפטערס ביי די גרויסע היטצען. באדעט קיין מאל גיט פריהער ווי א שטונדע נאך די נאהרונג. באדעט פריהער און דערנאך ערנעהרט. קליידונג און פרישע לופט. קליידעט די בייבי אזוי לויכט ווי מעגליך אין א הייסען וועמער. האלט די בייבי אויפ'ן פרייען לופט, אבער גיט אויפ'ן זון. לאזט ביינאכט די פענסטער אפען, אבער איחר מוזט זיי פערשטעלען מיט סקרינס צו ערווייטערען די פליגען. ווען דער וועמער ווערט פלוצלינג קאלט, מוז מען אויפפאסען צו פערמיידען פערקעלטונג. ער דארף טראגען א ווייכען דינעם פלאנעלענעם בינדער ארוםגעדרייט צוויי אדער דריי מאל ארום דעם קערפער. דיעזער בינדער דארף נאר זיין ברייט גענוג אום צו בעדעקען דעם בויך, און דארף זיין ארוםגעוויקעלט גלאט אהן קנייטשען, צוזאמענגעשמוקעוועט מיט ווייכע באוועל; קיינע פונם.

לאזט גיט דער בייבי שלאפען מיט אימיצען אין בעט. און אויב עס איז נישטא קיין וויגעלע, זאל די מוסער צושטעלען צו איחר בעט א פאר שטולען ווייך אונטערגעבעט און זאל די בייבי דארויף שלאפען. ער וועט זיך געפינען בעקוועמער אין א זומער נאכט ווי צו ליגען ביי דעם הייסען קערפער פון דער מוסער, און ער וועט גיט זיין געניגט אנדערע צו שטערען אדער אליין געשטערט צו זיין. די הינטער-זייטען פון די שטולען וועלען דער בייבי גיט לאזען פאלען, און די מוסער וועט לויכט קענען צוקומען צו איחר ווען עס איז נויטיג. אויב די בייבי ברעכט, לאקסירט אדער שיינט צו זיין קראנק, האלט אב די מילך און גיט איהם גיט אנדערס ווי ווארעמע וואסער אין דער זוג-באטעל און רופט דעם דאקטאר.

OPATRÉNÁ DIETACH V LETÉ.

Zvláštno jedená dietach je materinské mléko.

Ak len možno, dajte dietatu prsé.—Desat rázy telko dietata zomru, čo z flašky piju, ako čo prsé dostanú.

Dajte dietatu jest' porádné, v istim čase a ne vždy keď plačé. Jedon ráz každé dve alebo try hodiny je dostatočné, kim je dieta štiri lebo pet' tíždne staro; zatim ne tak časte. Dajte dietatu prsé kim je osem lebo devat mesačno. Ne odviknujte dieta v horucim povetré.

Mnoho diety zomrú každý rok skrz teho že ich nehaju s rodičám ku stolu sednut, a daju im táke jedla, prektoré maly žaludok je nésúcy. Kim dieta pri prsach nedajte mu any len kuštyk celistvého jedla, any kávu, teú čy pivo. Čakajte kim dieta má zuby na také jedla ktore potrebno žut'.

Ak nemáé mleko v prsach, dajte dietatu mleko z čistej flašky.

Dieta, ktoro z flašky pijé musy len dobro mleko dostávat, ktoto je vždy zakryto a na ladé. Keď nemožete mleko patrične zakryt, to ma byt uvareno, ak skoro ho dostaneté.

Aby mleko slatké zostalo pre dieta, dajte mleko, ktoré pre dieta potrebno na nasledné 24 hodiny, do tuhé zapchatej flašky, lebo do skleného krčaha, ktory je tuhé zakryty. Flaška alebo krčah musy byt vyvarený, kim mléko do teho lejeté. Dajte hrnec zimnej vody na pec a dajte do hrncu flašku s mlekem, otvorté a dajte malou ližickou pekacej sody ku jednim kvarte mleká. Zapchajte zasek flašky a nedovolté nikomu sa dotknut mleka, kim ho pre dieta ne béreté.

Nedajte dietatu pri moc.—Žaludok novorodeného dietata zdrzy dvá lebo try lyžicám a né viac, ako telo. Rácej by ste maly mené dat' v najprvších tíždach novorodeného dietata, ktoro z flasy pijé. Ako dieta narastné dávka može byt postupné zvýšsená tak že na koncu prvšeho mesiaca ak štyry lyžican može dostat káždy ráz. Daktoré diety viac požiadaju, druhé any telko ne zdrzia, ale vždy nebezpečnejšie viac dat' na jedon ráz, ako menéj.

Vážite dieta každý tížden.—Zdravo dieta o jedon funt má rástnut' káždy tížden v timto času života. Ak nerastné telko, opitajte sa Vašeho lekára jako jedaná maté mu dat' á srobté ako on vám porády.

Keď dieta plačé, pamätajte, že keď dieta dostane poriadné jest', to neplačé, z hladu.

Možno, že je smädno.

Možno že má krcé v bruché.

Pozorujte aby ruky a nohy boly teplé.

Aby nebolo pry horuco [úpoténo].

Aby ho špendliky nepichnuly.

Pripravená mleká pre dieta.—Ku každyn hrnčeku mléka dajte dvá hrnčeky vody a telo bjéleho cukru [ďakedy mlekovy cukor je lepšy], aby tako téplo bolo ako mleko prsach, potom dajte ma flašku cuclik.

Nedajte dietatu pod šesť mesiacoch jest' s lyžicou.—Cicaná je prirodny spôsob, ako má dieta dostať svoj potrav. Pry cicania péry, ústá a jazyk zméšajú jedená so slinim ustách a účinkuju patrične rozvinuta ustách a zubách.

Ne užívajte rúrku na flašké, len cuclik.

Nezabudnite flašku a cuclik za užívania umyt.—Diety častné dostanú "bolenia ustách," "vetrové krčy" a "letnú nemoc" skrz toho, že flaška je nedrzaná v patričnom poriadku.

Vycistte flašku bezodkladné po užívania.

Vycistte cuclik úplné z nútra a z vonká. Cucliky s rurkou sú pobodlé pre lenivu matkú, ale aj usmrtnú dieta.

Ako má byt pripravená jačmenova voda pre dieta.—Ak je dieta štiri lebo pet týždne staro, davajte mu jačmenovu vodu mesto običajnej vody. Dajte dvá lyžice perloveho jačmená ku štiri hrnčykam vody, nehajte jednu lebo viac hodiny varit', kim nezostane viac ako dvá hrnčike vody. Potom precedajte cez čistu handričku, vložte kvapku soly a srobté ho tak sladko, ako mléko prsach. Ku timto prilejte jeden hrnček mleko kravej, tak obaréno ak vyššie spisano, a tak začínajte dávat dietatu. Postúpné berté viac kraveho mléka a menej jačmenovej vody, takom spôsobom, že keď je dieta šesť mesiacno dostane dva tretiny mléka a jednu tretinu jačmenovej vody. To je najlepší potrav, čo dieta len dostať môže v čase kedy mu zuby idu a pri odvíknutia. Za timto časom už môžete dávat čisto mléko, obaréno ako vyššie spisano; chléb s mlékom; ryžu pečené bandurky s mlékom; dobre uvarenu múku ovosá s mlékom; mléko vždy má byt obaréno a nie uvareno. Inšie jedená ako te vyššie spomuté su nepotrebné.

Kúpania.—Drzte dieta v čistoté a ľahké vydržy horúčost. Aspon jeden ráz každý den treba dieta okupať, a vica rázy vo velmy horúcom povetré. Nekupajte dieta nikdy prevj ako celu hodinu za jedená. Prvej ho kupajte a potom davajte jest.

Sáty a črstvy zdúch.—V horúcom povetré dajte také ľahké šaty ak len možno. Drzte dieta na črstvom vzdúché a nie na slunkú. V nocy nehajte obloky otvorené, ale preci zavojené aby muchy nemohly sa dnuka dostať. Keď povétre na zimné sa obraty, mavajte pozor aby so dieta ne prechladlo. Ténka flanelovat pántla dva alebo try rázy okolo telc okrutena ma byt. Ta pantla nemá byt širša, len aby bruch zakryla a musy byt hľdaka bez krčé a záhyby, a pripnutá s niekoľkim nitkam makej cernej ne uživa jte špendliky.

Né nehajte dieta spat s druhym v tej samej postely.—Ak nemáte postelku to matká nech položí kelokolvek stolce ku svojej postely, nech ich s mekou pokrivkou zákrije a dieta tam položí. Tak mu tam ľepšie budú v letnej nocy, ako keď pri horucym telé matkej ležalo, a nebudé vyrušat nikoho a samo tez nebudé vyrušano. Zadok stolca ochrány dieta aby néspadlo a matká má ho pri ruké, ak mu dačo potrebno.

Ak dieta vraca, má beháčku alebo nemocnim vyzerá nedávajte mléka a nič inšo len teplu vodu z flaškej z ktorej cicalo a zašlite po lekára.

hogy olyan édes legyen, mint az anyatej. Öntse egy palaczkba és melegítse az anyatej hőmérsékére. Alkalmazzon gummi szopókát a palaczkra.

Hat hónapon alúl ne etesse a gyermeket kanállal.—A csecsemő természetes étmódja a szopás. Az ajkak, a száj és a nyelv szopó mozgulata szükséges ahhoz, hogy az étel a száj nyálkáival keverődjön és hogy a száj és a fogazat kellően kifejlődjék.

Ne használjon csövet a palackon.—Használjon szopókát.

Ne feledje el a palackot és a szopókát használat után megmosni.—A gyermek gyakran kap "szájfájást," "szeleket" vagy "nyári bajt," mert a palack nincsen kellő rendben tartva.

Tisztítsa a palackot azonnal használat után.

Tisztítsa a szopókát alaposan kívül és belül. Csövel ellátott szopókák igen kényelmesek a lusta anyára nézve, de a gyermeknek halált jelentenek.

Hogyan készítendő a gyermek részére árpavíz.—Mikor a gyermek négy vagy öt hetes a közönséges víz helyett árpa-vizet adjunk neki. Tegyen négy csésze hideg vízbe két evőkanállal gyöngy-árpát, főzze egy óra hosszat vagy tovább, úgy hogy a vízből csak két csészényi marad. Azután szűrje át tiszta ruhán; vegyen egy csipetnyi sót és édesítse meg az anyatej ízére. Ehez öntsön egy csészével a fentebb leírt módon melegített tehén-tejet és evvel kezdje az etetést. Fokozatosan vegyen több tejet és kevesebb árpa-vizet, úgy hogy mikor a gyermek már vagy hat hónapos, két harmad tejet és egy harmad árpa-vizet kap majd. Ez a legjobb táplálék a mi csak adható a gyermeknek fogzás és elszoktatás idjén. Mikor ez az idő elmúlt tiszta tej használható, az előbb leírt módon felmelegítve, tejes kenyér, tejes rizs, sült burgonya tejjel, jól megfőtt zabliszt tejjel (a tej mindenkor melegítve és nem megfőzve). Az említetten kívül más táplálék nem szükséges.

Fürdés.—Tartsa a gyermekét tisztán és jobban fogja türni a hőséget. Legalább egyszer naponta teljesen megfürdendő, rendkívüli hőségben még gyakrabban. Ne fürössze a gyermeket evés után egy órán belül. Először legyen a fürdés, azután az evés.

Ruházat és szabad levegő.—Meleg időben a ruházat oly könnyű legyen, mint csak lehetséges. Tartsa a gyermeket a szabad levegőn, de ne legyen a forró napon. Éjjel tartsa az ablakokat nyitva, de behálózva, hogy a legyek be ne jöhessenek. Mikor az időjárás hirtelen lehül, évakodni kell a hüléstől. Használjon vékony, puha kötöt, mely kétszer vagy háromszor átéti a testet. Az ilyen kötöt csak olyan széles legyen, hogy a hast befedje és simán, ráncz s csomó nélkül, rácsavarandó, azután illessze oda néhány öltéssel pamutcérnával, ne használjon tűt.

A gyermek ne aludjék más valakivel egy ágyban.—Ha nincs gyermekágya, toljon az anya két széket az ágya mellé, tegyen rájuk puha takarót és fektesse oda a gyermeket. Ez egy nyári éjszakán sokkal kényelmesebb lesz, mint mikor az anyja meleg testéhez dől, azonfelül pedig sem nem zavar másokat, és nincs megzavarva maga sem. A szék háta megóvjá az eséstől és az anyja kezénél van, ha szükséges valami.

Ha a gyermek hány, hasmenése van, vagy betegnek látszik, ne adjon neki semmiféle tejet és semmi mást, mint meleg vizet a szopó palackkal s küldjön az orvosért.

CURA ESTIVA DEI BAMBINI.

Il nutrimento adatto pei bambini è il latte della madre.

Allevate il vostro bambino voi stessa, se ciò è possibile.—La mortalità dei bambini è in queste proporzioni: che per ogni uno che ne muore, che è stato allattato a petto, ne muoiono dieci che sono stati allattati con la bottiglia.

Allattate il bambino regolarmente a ore fisse, e non ogni volta che piange. Bisogna allattare il bambino una volta ogni due o tre ore finchè egli ha l'età di quattro o cinque settimane; dopo di questa età lo si deve allattare non tanto spesso. Si deve dare il latte al bambino finchè egli raggiunge gli otto o nove mesi. Non si svezza il bambino durante la stagione calda.

Molti ragazzi muoiono ogni anno pel fatto che essi sono messi a tavola con la famiglia, e si dà loro del cibo non adatto ai loro piccoli stomachi. Finchè voi allattate il vostro bambino non gli date un boccone di cibo solido, nè gli date tè, caffè o birra. Aspettate finchè egli abbia messo i denti prima di dargli del cibo che ha bisogno di esser masticato.

Se vi manca il latte del petto date al vostro bambino latte di vavva con una bottiglia pulita.

I bambini che sono allevati col latte delle bottiglie debbono avere soltanto latte buono, e questo deve esser mantenuto sempre coperto e in ghiaccio. Se il latte non può esser mantenuto coperto come si deve, lo si deve bollire appena ricevuto.

Per mantener dolce il latte pel vostro bambino si metta in una bottiglia o in un boccaccio di vetro a coperchio ben stretto, il latte di cui il bambino avrà bisogno per le prossime 24 ore. Tanto la bottiglia e il sughero, quanto il boccaccio e il coperchio debbono bollirsi prima che vi si versi dentro il latte. Si ponga sulla stufa una casseruola con acqua fresca. Vi si ponga dentro il recipiente col latte del bambino, col coperchio avvitato lento. Quando l'acqua bolle toglietene il recipiente col latte del bambino, apritelo, aggiungetevi poco meno di mezzo cucchiaino di bicarbonato di soda per ogni litro di latte, e quindi si ricopra il recipiente. Non permettete a nessuno di toccare il latte, altro che quando serve pel bambino.

Non nutrite troppo il bambino.—Lo stomaco di un neonato può contenerne da due a tre cucchiaini da tavola, e non più di tanto. Durante la prima settimana, più o meno, della vita di un bambino che è allevato col latte di bottiglia, bisognerebbe dargliene anche meno di questo. A misura che il bambino cresce, la quantità deve crescere gradatamente, così che alla fine del primo mese il bambino debba trovarsi a prendere circa quattro cucchiaini da tavola per volta. Alcuni bambini possono averne bisogno di più, mentre altri non possono sostenerne tanto, ma vi è sempre più pericolo a darne troppo alla volta che poco.

Pesate il bambino ogni settimana.—Un bambino di buona salute dovrebbe guadagnare durante questo periodo, una libbra per settimana. Se il vostro bambino non cresce tanto consultate il medico pel cibo che bisogna dargli, e fatevi guidare dal suo consiglio.

Se il bambino piange, ricordatevi che se è stato nutrito regolarmente non piange per fame.

E può aver sete.

O può avere una colica.

Badate che abbia le mani e piedi caldi.

Che non stia troppo caldo, da sudare.

Che la sua biancheria sia morbida, pulita e asciutta.

Che non vi siano spilli che lo pungano.

Come si prepara il latte per nutrire il bambino.—Ad ogni tazza di latte si aggiungano due tazze di acqua, e del zucchero bianco (qualche volta il zucchero di latte è migliore) abbastanza da renderlo dolce come il latte di petto. Si versi quindi nella bottiglia e si riscaldi questo latte finchè esso sia tanto caldo quanto il latte di petto. Si metta quindi alla bottiglia il capezzolo di gomma.

Non si usi il cucchiaino nel nutrire un bambino al di sotto dei sei mesi.—Il succhiare è il mezzo naturale che un bambino adopera per nutrirsi. Perchè il nutrimento si mischi coi fluidi della bocca, e per l'adeguato sviluppo della bocca e dei denti vi è bisogno dell'atto succhiativo delle labbra, della bocca e della lingua.

Non si usi un cannello sulla bottiglia, si usi un capezzolo.

Non dimenticate di lavare la bottiglia e il capezzolo dopo che ve ne siete servita.—Spesso i bambini pigliano "mali alla bocca," "coliche flatulenti" e "sciolte estive" per difetto di cura della bottiglia da allattamento.

Si pulisca la bottiglia immediatamente dopo l'allattamento. Si pulisca ben bene il capezzolo, di fuori e di dentro. I capezzoli col tubo sono comodi per una madre pigra, ma significano la morte del bambino.

Come si prepara l'acqua di orzo pel bambino.—Quando il bambino ha quattro o cinque settimane, invece di acqua semplice si deve usare acqua di orzo. Si mettano due cucchiaini da tavola di orzo mondato, in quattro tazze di acqua fresca, e si faccia bollire per un ora o più finchè l'acqua si restringa a due tazze. Si passi quindi per un panno pulito, vi si aggiunga un pizzico di sale, e si addolcisca tanto da avere il sapore di latte di petto. Si aggiunga questo ad una tazza di latte di vacca, riscaldato come si è detto innanzi e s'incominci a nutrire il bambino con queste proporzioni. A poco a poco, gradatamente si usi più latte di vacca e meno acqua di orzo finchè, quando il bambino ha circa sei mesi si abbia la proporzione di due terzi di latte, ed un terzo di acqua di orzo. Questo sarà un nutrimento abbastanza buono per lui durante il periodo della dentizione e dello svezzamento. Passato questo periodo gli si potrà dare latte puro, riscaldato come si è detto innanzi; pane e latte; riso e latte; latte con patate infornate; brodetto di oatmeal ben cotto, e latte (il latte sempre riscaldato, non bollito). Non vi è necessità di altri cibi salvo quelli di sopra menzionati.

Bagni.—Si mantenga il bambino pulito, ed egli sopporterà il caldo assai meglio. Egli dovrebbe avere almeno un bagno completo ogni giorno, e più d'uno durante i calori estremi. Non si dia mai il bagno

al bambino entro l'ora nella quale egli ha avuto il latte. Gli si da prima il bagno e poi da succhiare.

Panni ed aria fresca.—Quando fa caldo si vesta il bambino quanto più leggermente è possibile, si tenga il bambino all'aria aperta, ma non al sole ardente. La notte si tengano le retine e si evitino le mosche. Quando il tempo si raffredda tutto a un tratto bisogna aver cura di evitare che il bambino si raffreddi. Bisognerebbe in tal caso avvolgerne il corpo due o tre volte con una sottile e morbida fascia di flanella. Questa fascia dovrebb'essere abbastanza larga da coprir la pancia, e dovrebb'essere avvolta liscia e senza crespe o piegature, aggiustata con qualche punto di cotone morbido da rammendare e senza spilli.

Non fate dormire il bambino nello stesso letto, assieme ad altri.—Se non si ha una culla, la madre dovrebbe mettere accanto al suo letto un paio di sedie con popravi una morbida copertura, e farvi dormire il bambino. In una notte estiva starà a miglior agio che non stando presso il caldo corpo della madre, e sarà più difficile che dia fastidio agli altri o che ne riceva. Le spalliere delle sedie eviteranno che il bambino cada, e la madre è sempre a portata per prenderne cura, ove mai fosse necessario.

Se il bambino vomicasse, avesse diarrea, o sembrasse malaticcio, non gli date più latte, non gli date che acqua tiepida nella bottiglia da allattare, e mandate a chiamare il dottore.

ADVICE TO THOSE ABOUT TO BECOME MOTHERS.

Before the birth of her baby, there are some things which may be done by the mother to make her more likely to be well herself and to have a healthy child.

Food.—The food of the mother should be abundant, plain, without much spice and seasoning, and with not more than one cup of coffee or tea at a meal, and none between meals. If she wants more to drink, there is nothing better for her than milk. Meat should not be eaten oftener than once a day. The more water that is taken the better.

Bowels.—It is very important to have a movement of the bowels every day. Strong medicines must not, however, be used to open the bowels; costiveness can be avoided by sufficient exercise and suitable food, as brown bread, stewed vegetables, fruit, and abundance of water.

Work.—The woman may do her usual work, but should not work hard enough to get very tired. Work in store and mills is not good, and it should be stopped as soon as possible, at least four weeks before the expected birth of the baby. She should go out of doors every day, but must not run for cars, or jump, or overexert herself in any way.

Once in four weeks, at the time when the woman would have been unwell if she were not to have a baby, she should be even more careful than usual about overexertion, because at these times there is more danger of miscarriage.

Clothing.—All clothing should be loose. As soon as she begins to show her condition, the mother should leave off her corsets, and have nothing about the waist that is at all tight. A loose corset waist should be worn to which side garters should be attached instead of wearing circular ones about the legs.

Baths.—It is important to keep the skin in a healthy condition, and this is best done by frequent bathing. Sea bathing is not good, however, because it is too violent.

Nipples.—Nothing should be put on the nipples until the last month. Then they should be washed every day with clean soap and water and boracic acid solution put on them. Get some boracic acid from the drug store and put a heaping tablespoonful in a pint bottle and fill with warm water, or better, put in warm water two-thirds and alcohol one-third. If they are small or turned in they should once every day be gently pulled out, so as to make them ready for the baby to nurse.

Food for baby.—No food is as good for a baby as its mother's milk. This is why so many more bottle-fed babies are sick and die than breast-fed babies. For this reason the mother ought to try to nurse her baby as long as she has any milk at all. One or two feedings a day from the breast are a great deal better than none at all. Keep the body well nourished before the birth of the baby in order to secure a good supply of milk. Regular nursing and corn-meal gruel, a pint or more a day, are the best things to make more milk.

PROVIDENCE, 1910.

TO EXPECTANT MOTHERS.

Too frequently the expectant mother receives no advice from a physician or anyone else competent, presuming the condition to be a perfectly normal one that needs no assistance. This is far from true. So many little conditions arise that intelligent care and instruction would prevent not only great discomfort but lower the mortality rate in these conditions.

The first and commonest symptom is nausea. This is purely reflex and while no specific drug will cure the condition, by proper advice in the way of diet and the addition of some simple stomachics or some drug furnishing temporary rest to the organs will accomplish wonders.

Next is the obstinate constipation. Any milk laxative, such as the compound licorice powder or phenolax wafers not only adds to the comfort of the mother but assists in the development of a healthy child.

The most serious of all are the kidney complications. These are usually brought on by cold drafts; exposure, such as sitting on damp ground or being chilled by long rides or drenched with rain. The presence of albumin denotes the possibility of convulsions, and urine analysis should, from the fourth to the ninth month, be made at least every two weeks. * * *

Next in importance is the care of the nipples. By persistent use of alcohol or glycerol of tannin, the skin can be hardened and prevent painful fissures that too frequently follow.

The duration of the normal pregnancy is 280 days. Near the termination of that time, the mother should have ready a quiet room apart from the rest of the house and other children, if possible, because rest is above all things most desirable in the new mother. She should have ready rubber sheet to protect the bedding; binders, three or more, made of old toweling, to perfectly support the relaxed abdomen and not only derive perfect comfort but also to preserve a more comely appearance in after years; clean basins and pads, that can be made from the ordinary cotton covered with newspapers and sterilized afterwards by dry heat in the oven. Also, plenty of clean cloths and sterile oil.

For the baby she should have at least four dozen napkins; four soft binders to bind its little abdomen and protect the cord. Shirts supported by straps from the shoulders, skirts always made with the body and not with a band that must be bound tightly around the ribs to hold in place; soft pillows, soft covers, and knit wrapping blanket. These, together with sacks, wrappers, bibs, and caps, complete the new wardrobe.

The baby's basket should be one specifically for its own use. This should contain large and small safety pins, talcum powder, a soft hairbrush, castile soap, blunt scissors for the nails, old linen for clean-

ing the mouth, soft towels for the bath, cold cream or cocoa butter, and a bath blanket.

The feeding of the baby then is of the most importance. Unfortunately, there are two classes of mothers: the one who, either from a life of idleness or lack of exercise, secretes insufficient milk for the baby's food, and the other, who from overwork, lack of proper diet, and lack of sleep confronts the same condition. No milk, no matter how carefully prepared, is as good for the baby as mother's milk. However, when this is impossible, the next best substitute is cow's milk. The milk of a mother is alkaline. The milk of a cow is acid. The milk of the cow contains much more casein, so of necessity must be modified some. In the city every mother who must raise her child on a bottle should use nothing but certified milk. A little inquiry on her part will tell you just what to use. In country districts or small towns it is possible for intelligent parents to see to it that the milk for their baby comes from cows that are free from tuberculosis or any other disease, that the hair is clipped away from the cow's udders, that the milking is done in narrow-mouthed buckets covered with clean cloth, so that there is no possibility of excretions from the cow or dirt from the stable contaminating the milk. It is an unfortunate fact that the mortality rate in infants is higher in the country nearer the center of production of raw cow's milk than it is in cities, and this is due only to carelessness.

If a bottle must be used, keep it scrupulously clean, with a large nipple fitting directly over the bottle. Under no condition should the old rubber tube be used. At the completion of each feeding the bottle and nipple should be boiled and then kept waiting for use in an ordinary solution of bicarbonate of soda, which keeps it sweet and clean.

The capacity of a newborn babe's stomach is, during the first week, $1\frac{1}{2}$ fluid ounces; during the second week, $2\frac{1}{2}$ ounces; from the third and fourth week about 3 ounces; at the third month, 5 ounces; at the ninth month, 12 ounces. A study of this table will easily convince you that most babies are overfed. The newborn babe should, during the first three days of its existence, have no other food save that which comes from the mother's breast. The use of cloth filled with sugar or a diluted solution of brandy is absolutely criminal.

Next to dirt, the greatest murderer of newborn babies is the house fly. One speck on the baby's nipple may be sufficient to start an attack of intestinal trouble that would result fatally. The pernicious habit of too many mothers is the throwing of soiled napkins in some corner of the kitchen or back porch, thereby furnishing food for flies, and in turn to be transferred to the milk, the baby's nipple, or even direct to the baby's face, thereby setting up an infection that will assist materially in increasing infant mortality.

All babies should early become accustomed to an abundance of fresh air. Night air will not hurt babies any more than adults, unless it is last night's air shut up in some close room. Accustom them to sleeping with all the windows open, or better yet, to taking their daily naps on the porch, protected only from drafts. See that no single day passes that the infant does not have at least two hours outdoors, breathing in all the ozone that the Creator intended it should have.

A proper cart or large basket or crib for sleeping is incomparably better than the old cradle, as the digestion is more perfect in children, as in adults, when they are not constantly throwing their center of gravity outside their bodies.

Whenever possible a graduate nurse should be in charge of the mother and babe. Where it is not possible, a person of wide experience, who has had it thoroughly impressed upon her mind that cleanliness is next if not equal to godliness, is the only one to be safely trusted.

A normal child should weigh at birth $7\frac{1}{2}$ pounds; at the end of the second week, $9\frac{1}{2}$ pounds; at the end of the third week, 11 pounds; at the end of the fourth week, $12\frac{1}{2}$ pounds; and at the end of one year, 21 pounds. These are perfectly normal averages, but variations can not but occur.

It is important that the mother, following the birth of her child, shall have ample opportunity for rest. She should stay in bed at least two weeks. The habit of entertaining friends the following day or for several days after can not be too strongly condemned. She should have ample opportunity to sleep, for this will bring back color to her cheeks more quickly than malt or any other medicines masquerading under the name of tonics.

The diet for the first few days until milk appears in the breast, which is usually 48 hours after, should be liquid entirely. After this a liberal diet of easily assimilated foods usually solves the problem of the milk supply.

There is no other condition in life where absolute cleanliness is so essential as it is in this condition for the welfare of mother as well as the babe.

A quiet life during the period that the mother is nursing the babe will not only add to her comfort and happiness but to that of her babe as well.

Late suppers, dances, improper diet, and overwork all tend to decrease the quantity and quality of her milk, as well as to affect the digestion and disposition of the child. A prolonged rest will avoid many of the displacements with the accompanying discomforts or even surgical operations that too frequently follow childbirth.



UNITED STATES DEPARTMENT OF LABOR

JAMES J. DAVIS, Secretary

CHILDREN'S BUREAU

GRACE ABBOTT, Chief

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no

PRENATAL CARE



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SEE THAT THE BIRTH OF YOUR BABY IS REGISTERED

It is of the utmost importance to have the birth of your baby promptly and properly registered. This should be done within 36 hours after the baby's birth.

In most States the physician, midwife, nurse, or other attendant is required by law to report the birth to the local registrar, who will see that the date of birth and the child's name, together with other related facts, are made matters of public record. Birth registration is necessary in order to prove, among other things, the child's age and citizenship, his right to go to school, his right to go to work, to inherit property, to marry, to hold office, to obtain passports for foreign travel, and to prove his mother's right to a pension, if she is a widow. Parents should make sure that this protection of fundamental rights is assured to every child born to them. If there is any doubt about whether the birth of a child has been registered, an inquiry may be sent to the State board of health at the State capital, where the records are filed. If the birth has not been reported the board will furnish a blank to be filled out and returned. It is suggested that a memorandum be made below of certain facts recorded in the birth certificate.

Baby's name

Father's name

Mother's maiden name

Sex of baby

If twin or triplet, give number in order of birth

Date of baby's birth
(Month) (Day) (Year)

Birthplace:

City, town, or village

County

State

Attending physician:

Name

Address

Baby's registered number

CONTENTS

	Page
Letter of transmittal.....	v
Signs of pregnancy.....	1
Duration of pregnancy.....	2
Engaging the doctor and the nurse.....	3
Importance of physical examination.....	3
Importance of medical supervision throughout pregnancy.....	4
Selection of a nurse.....	5
The hygiene of pregnancy.....	6
Diet.....	6
Exercise and rest.....	13
Clothing.....	15
Care of the bowels.....	17
Care of the kidneys.....	17
Baths and care of the skin.....	18
Care of the teeth.....	18
Care of the breasts.....	19
Intercourse during pregnancy.....	20
Mental hygiene.....	20
Home or hospital for the delivery.....	22
Supplies and equipment.....	23
The delivery room and its equipment.....	23
Supplies for the mother.....	24
Supplies for the baby.....	26
Common disorders of pregnancy.....	29
Nausea and vomiting.....	29
Heartburn.....	29
Varicose veins and piles.....	29
Cramps in the legs.....	30
Relaxation of the pelvic joints.....	30
Leucorrhea.....	30
Complications of pregnancy.....	31
Toxemia.....	31
Miscarriage.....	32
Bleeding in pregnancy.....	34
Birth of the baby.....	35
Precautions that must be taken.....	35
Labor.....	35
Emergencies.....	38
First care of the newborn.....	40
Nitrate of silver for the baby's eyes.....	40
Bathing the baby.....	41
The baby's stools.....	41
Lying-in period.....	42

	Page
Nursing the baby-----	43
Advantages of breast feeding over artificial feeding-----	43
Colostrum -----	43
Position for nursing-----	44
Feeding schedule-----	44
Care of the breasts-----	44
The baby's progress-----	45
Hygiene of the nursing mother-----	47
A day's food plan for the nursing mother-----	47
Healthful living especially important for nursing mothers-----	48
Temporary decrease in milk supply no reason for weaning-----	49
Premature delivery and the care of the premature baby-----	50
Keeping the baby at normal temperature-----	51
Protecting the baby from infections-----	54
Feeding the baby-----	55
Sun baths-----	57
The baby's later development-----	57
Selected books of interest to mothers-----	58
Glossary -----	59
Index-----	68

LETTER OF TRANSMITTAL

U. S. DEPARTMENT OF LABOR,
CHILDREN'S BUREAU,
Washington, September 25, 1930.

SIR: There is transmitted herewith a complete revision of the bulletin Prenatal Care, originally published in 1913 as the first of the Children's Bureau series on the care of children.

This revision is the work of Dr. Robert L. De Normandie, chairman of the bureau's advisory committee of obstetricians, in cooperation with the members of the committee and with Dr. Blanche M. Haines, director of the maternity and infant hygiene division of the bureau. The members of the committee are: Dr. Robert L. De Normandie, instructor in obstetrics, Harvard Medical School, chairman; Dr. Fred L. Adair, professor of obstetrics and gynecology, University of Chicago; Dr. Rudolph W. Holmes, professor of obstetrics, Northwestern University Medical School, Chicago; Dr. Ralph W. Lobenstine, chairman medical advisory board, Maternity Center Association, New York; Dr. Frank W. Lynch, professor of obstetrics and gynecology, University of California Medical School; Dr. James R. McCord, professor of obstetrics and gynecology, Emory University School of Medicine, Atlanta; Dr. C. Jeff Miller, professor of gynecology, Tulane University of Louisiana School of Medicine, New Orleans; Dr. Otto H. Schwarz, professor of obstetrics and gynecology, Washington University School of Medicine, St. Louis; Dr. Alice N. Pickett, assistant professor of obstetrics, University of Louisville School of Medicine, Louisville. Assistance was also received from Dr. E. V. McCollum, professor of biochemistry, School of Hygiene and Public Health, Johns Hopkins University, who read the manuscript and made valuable suggestions on the diet section.

Respectfully submitted.

GRACE ABBOTT, *Chief.*

Hon. JAMES J. DAVIS,
Secretary of Labor.

PRENATAL CARE

Prenatal care is that part of maternal care which has as its object the complete supervision of the pregnant woman in order to preserve the happiness, health, and life of the mother and child. What this prenatal care should be is the subject matter of this book.

More important than anything else in planning the best possible care for mother and child is that the mother should go to a doctor for examination and advice just as soon as she thinks she is pregnant and should remain under his constant care until the baby is born. This book is not meant to take the place of this medical care. It is written in the hope that it will be helpful to those expectant mothers for whom medical aid is not at hand, and to those doctors who may wish their patients to have it as a supplement to their instructions.

SIGNS OF PREGNANCY

Early signs that a pregnancy is probably present are these:

1. Missing a monthly period.
2. Changes in the breasts.
3. Nausea or vomiting—"morning sickness."
4. Desire to pass urine more often than usual.

The first is the most significant. The missing of the monthly, or menstrual, period is especially suggestive of pregnancy in the case of a woman who has always had regular, normal monthly periods, and has had a recent opportunity of becoming pregnant. The missing of two monthly periods, one after the other, makes pregnancy more probable.

At the time of the first skipped period the breasts often get a little larger. They may also be tender to the touch and may have a stinging or prickling feeling. If the breasts have never felt like this before during the monthly period, the feeling is probably another sign that pregnancy exists.

A feeling of nausea, or sickness of the stomach, sometimes with vomiting, is a very common early sign of pregnancy. Most women who are troubled with this nausea feel it in the morning, and it is commonly called "morning sickness." Some women feel it in the

late afternoon or early evening. And some women do not feel it at all.

The desire to pass urine more often than usual is very common early in pregnancy. Women when pregnant sometimes have to get up during the night to pass urine who before had been able to sleep right through the night.

When all four of these signs appear, the woman is probably pregnant. A doctor can give a more definite opinion, however, after he has made an examination by the vagina, which is the lower part of the birth canal. This examination should always be made early in pregnancy, as it enables the doctor to make sure that the pelvic organs—those parts of the body directly connected with child-bearing—are in good condition and position.

At about four and a half months the mother can usually “feel life”—that is, feel the baby move in the uterus, or womb, the organ in which it develops. This movement, which is also called “the quickening,” is a fairly certain sign of pregnancy. The movement of gas in the intestines, however, may cause a feeling so similar that a woman may mistake it for the quickening. The positive signs that a woman is pregnant are feeling the baby move and hearing the baby’s heart beat. These can be determined by a doctor’s examination about the fifth month or sometimes earlier.

DURATION OF PREGNANCY

The probable length of pregnancy is about 40 weeks, or 280 days. If you count 30 days to the month, the 280 days come to just a little more than the 9 months commonly spoken of as the period of pregnancy. You may determine the probable date of delivery by counting back from the beginning of the last monthly period 3 calendar months and adding 7 days. For example, if the last monthly period began on October 30, counting back 3 months to July 30 and adding 7 days gives August 6 as the estimated date of confinement. Many babies are born a few days earlier or a few days later than the expected date, some as much as 2 or 3 weeks later. In these cases the usual explanation is that the pregnancy began in relation to the period that was missed and not from the last period that appeared. Therefore, if the delivery does not come when it is expected, there is no reason, in by far the majority of cases, to think that anything is abnormal; it usually means that the patient did not become pregnant as early as it was thought.

ENGAGING THE DOCTOR AND THE NURSE

As soon as a woman thinks she may be pregnant she should choose her doctor and go to him at once for a complete physical examination and for advice as to the hygiene of pregnancy. At this first visit the doctor will ask her many questions about her medical history—what diseases and operations she has had, if any, with special detail for any involving the abdomen or the pelvis; whether her monthly periods have always been regular and normal; whether she has been pregnant before, and, if so, when her pregnancy and labor occurred

Talking it over with the doctor at the first visit

and what they were like. He will also ask her the date and character of her last monthly period, for from this he will estimate the date of delivery.

IMPORTANCE OF PHYSICAL EXAMINATION

A complete physical examination will include—besides an external abdominal and an internal pelvic examination and measurements of the pelvis, or bony framework—an examination of the teeth, tonsils, throat, thyroid, heart, lungs, kidneys, and digestive organs, taking of blood pressure and weight, and testing of the blood. This examination is most important for the mother's well-being, for it enables the doctor to find out whether her organs are in good condi-

tion and to start treatment at once if anything is wrong. Moreover, if the physician knows his patient's condition early in pregnancy, he will be able to discover slight changes at later examinations if they appear and interpret them intelligently. Pregnancy and labor are normal functions of the body and do not normally interfere with health; in fact, many women are in better health after pregnancy than before. However, pregnancy must be carefully and constantly watched, for it may become abnormal very quickly and will then require special treatment to insure a happy outcome for mother and child.

The doctor taking the mother's blood pressure

[Many doctors take the blood pressure with the patient lying down.]

IMPORTANCE OF MEDICAL SUPERVISION THROUGHOUT PREGNANCY

It is at this first visit that the doctor will go over with the expectant mother the hygiene of pregnancy, or prenatal care. He will explain to her why she should go at once to a good dentist. The doctor will tell her when he himself wishes to see her—at least once a month during the first six months, every two weeks or oftener in the next two months, and every week in the last month. He will explain to her what he will do at each visit—look into her general condition, take her blood pressure, analyze her urine, and carefully weigh her.

The plan that will be followed should be carefully talked over by the doctor and the expectant mother, and she should feel free to ask about its cost. If she can not afford to go to a private physician, she should go at once to a prenatal center or clinic. She should report to the clinic as required and should follow absolutely the directions given to her at the clinic just as she would the instructions of a private physician.

If a woman finds it impossible to see a doctor as often as has been advised, it is highly important that she should be in close touch with a district or public-health nurse who will observe her and report any suspicious symptoms to the doctor in charge.

SELECTION OF A NURSE

If she has decided to have the baby at home, she will want a nurse; and the doctor can probably suggest one, for most doctors have on file the names of good nurses that have worked with them. A private nurse should be engaged some time before the expected date of delivery; and as this date is uncertain it is well to have a definite understanding when her pay is to begin. The nurse should visit the home a few weeks before the baby is expected and make herself familiar with the rooms and the arrangements for the birth. She will be needed for a longer or a shorter period in different cases; but as it is important that the mother should rest and be relieved of strain for the first weeks after childbirth, it is worth stretching a point financially to keep the nurse as long as she is needed—two weeks at least and three or four weeks in some cases. In many places, particularly in large cities, a nurse from the visiting-nurse association will come as needed and is paid only a small fee for each visit. If the confinement is a normal one and there is some one to do the housework, the needs of mother and baby may be provided for in this way very well and much more cheaply than when a trained nurse is employed for the entire time. Other forms of nursing service may be had in different communities; some are good and some are not so good. But the best nursing that she can have is what the expectant mother should plan for.

THE HYGIENE OF PREGNANCY

Simple rules for keeping well during pregnancy are given by the doctor at the first visit of the expectant mother. The details that he would tell her about if he had all the time that he would like are set down here for her to read and refer to. She must remember that she is like an athlete in training for a race or a swimming contest, who lives according to rules worked out with the test that he will have to meet in mind. Her test is her confinement, and the goal is health for the baby and herself.

DIET

During the pregnancy nature is building a new person. The mother supplies the building materials in the form of nourishment which passes through the placenta (afterbirth) to the growing baby. Therefore her diet must have in it the foods which contain the proper kinds of building materials. A woman may live in fair health on a diet upon which she can not nourish an unborn baby and keep her health. If the baby can not get what he needs from the mother's food, he will take it from her body. This means that the mother will be undernourished and, perhaps, her teeth will suffer. Neither of these things needs to happen if she eats properly and was in good health at the time of conception.

ESSENTIAL ELEMENTS IN THE DIET

The diet at all times should contain sufficient amounts of tissue-building substances (proteins), starches (carbohydrates), fats, mineral matter, and the essential food elements known as vitamins. During pregnancy the diet should contain an extra amount of minerals and vitamins. The foods that are needed for building bones and other body tissues are milk, whole-grain cereals, eggs, fruit, and green vegetables like spinach and lettuce. These essential growth foods, which safeguard the bones and teeth, brain, and muscles of the baby, can be increased in the diet without necessarily increasing the total amount of food taken daily. Many persons in this country live mainly on a faulty diet of bread, meat, potatoes, and sugar. Milk, green vegetables, and fruit are needed to supply the defects of such a diet, which is especially poor in vitamins and minerals, the food elements in which the diet of the expectant mother should be especially rich.

THE VALUE OF MILK

If plenty of green leafy vegetables are eaten daily, a quart of milk a day (including what is used in cooking and on cereal) will give the mother enough calcium (lime) to insure her own bones and teeth against injury in supplying the baby's needs. It seems practically impossible for the pregnant woman to get enough calcium in her diet unless she takes daily at least a pint of milk or its equivalent. Milk is superior to any other single food in its combination of protein value, abundance of calcium and variety of other minerals, and richness in vitamins. The use of milk in cooking cereals, soups, white sauce, custards, puddings, and cocoa helps to put the needed quart in the daily food. Skimmed milk, buttermilk, or cottage cheese made with rennet may be used instead of whole milk if butter or cream is used. When good fresh milk is not available, milk powder or evaporated milk may be taken. Some women who dislike milk may find mixing milk powder with other foods the easiest way in which to obtain the required amount.

Butter (not butter substitute) or cream served on food adds greatly to the vitamin as well as the fuel value of the diet.

WHOLE GRAINS

Whole grains have a high mineral and vitamin content. For this reason, and also because they help to regulate the bowels, it is well for the pregnant woman to have at least part of her breads and cereals made of whole grains.

GREEN LEAFY VEGETABLES

The green leafy vegetables, such as spinach, chard, lettuce, endive, cress, cabbage, kale, collards, cauliflower, Brussels sprouts, string beans, dandelion greens, turnip tops, and beet tops, have a greater value in the diet than tubers (such as potatoes), or root vegetables (such as carrots), or legumes (such as peas and beans).

SAMPLE MENUS

If all expectant mothers are divided into three groups according to their weight at the beginning of pregnancy, they may be called underweight, average, and overweight. Their diets should vary in fuel value, which is measured by a unit called calories, from 4,000 calories a day for the underweight woman to 2,000 calories for the overweight woman. What may be called the first 1,000 calories should be the same for all, however, as they constitute the daily dietary essentials for growth: One quart of milk, one raw-vegetable

salad, one egg, one-half grapefruit or an orange or tomato, one cooked green leafy vegetable, and one serving of cereal or bread. If meat or fish, potato, sugar, fruit dessert, and bread and butter are added to these essential foods, the diet will be sufficient in calories and adequate in the growth essentials for the average expectant mother. A sample day's menu for the expectant mother of average

Essential foods for the expectant mother

weight who is not doing especially hard work may be given as follows:

A SAMPLE DAY'S MENU FOR THE AVERAGE PREGNANT WOMAN

(The "dietary essentials" and 2,000 calories more)

Breakfast

Raw fruit: One-half grapefruit or whole orange.

Cereal: Oatmeal, or any whole-grain cereal, with whole milk and sugar.

Bread and butter: One slice of toast with one pat of butter.

Milk: One cup of cocoa made with whole milk.

10 a. m. luncheon

Milk: One glass of whole milk, with or without egg.

Dinner

Meat, fish, or egg: Two beef balls, or scrambled eggs.

Potato: Baked potato with one pat of butter.

Green vegetable: Creamed spinach.

Bread and butter: One slice of bread with one pat of butter.

Dessert: Baked custard made with whole milk.

Supper or luncheon

Soup or other hot dish (made with whole milk):

Creamed pea soup, or macaroni, or rice and cheese.

Salad: Raw-vegetable and nut salad on lettuce with mayonnaise dressing.

Bread and butter: Two date bran muffins with one and one-half pats of butter.

Cooked fruit: Baked apple with whole milk.

The pregnant woman of average weight who is doing hard work and the underweight pregnant woman will require more food—a total of 4,000 calories. The following may be suggested as a sample day's menu for either of these women:

A SAMPLE DAY'S MENU FOR THE UNDERWEIGHT PREGNANT WOMAN

[The "dietary essentials" and 3,000 calories more]

Breakfast

Raw fruit: One-half grapefruit or whole orange.

Cereal: Oatmeal, or any whole-grain cereal, with whole milk and sugar.

Bread and butter: Two slices of toast with two pats of butter.

Milk: One cup of cocoa made with whole milk.

10 a. m. luncheon

Milk: One glass of whole milk, with or without egg.

Dinner

Meat, fish, or egg: Two beef balls, or mutton stew.

Potatoes: Two baked potatoes with two pats of butter.

Green vegetable: Creamed spinach.

Bread and butter: Two slices of bread with one pat of butter.

Dessert: Baked custard made with whole milk.

One cup of tea or coffee with cream and sugar.

Afternoon luncheon

Fruit or milk: One raw apple or other fresh fruit, or glass of milk.

PRENATAL CARE*Supper or luncheon*

Soup or other hot dish (made with whole milk):

Creamed pea soup, or rice and cheese.

Salad: Raw-vegetable and nut salad on lettuce with mayonnaise dressing.

Bread and butter: Two date bran muffins with two pats of butter.

Cooked fruit: Baked apple with top milk or cream.

The overweight woman must get her "dietary essentials," but she will need less of additional foods, so that her total must not exceed 2,000 calories. She must reduce her use of sugar, potato, bread, and cereal. The following sample day's menu shows how she can take the dietary essentials and some additional foods without necessarily having a fattening diet:

A SAMPLE DAY'S MENU FOR THE OVERWEIGHT PREGNANT WOMAN

[The "dietary essentials" and 1,000 calories more]

Breakfast

Raw fruit: One-half grapefruit or whole orange.

Bread and butter: One slice of toast with one pat of butter.

Milk: One cup of cocoa made with whole milk.

10 a. m. luncheon

Milk: One glass of whole milk.

Dinner

Meat, fish, or egg: One beef ball, or small serving of fish.

Green vegetable: Creamed spinach.

Bread and butter: One slice of bread with one pat of butter.

Dessert: Baked custard made with whole milk.

Supper or luncheon

Salad: Raw-vegetable and nut salad on lettuce.

Bread and butter: Two date bran muffins with one-half pat of butter.

Cooked fruit: Baked apple with whole milk.

Milk: One glass of whole milk.

A LAXATIVE DIET

The mother's body not only must supply food for the baby's development but must carry off the baby's waste products as well as her own. The accumulation of waste products in the system is the cause of various minor ailments in pregnancy and of some serious ones. Since liquids help the bowels, kidneys, and skin to throw off these waste products, and thus do away with some of the sources

of danger at this time, it is most important that liquids form a large part of the diet of every pregnant woman. The proper amount to be taken varies, but it should usually be about 3 quarts. Much of this should be water, of which the average expectant mother should drink 8 glasses a day. If she does this, the milk, cocoa, soup, and other liquids included in the diet will supply the remaining quantity. If one is accustomed to the daily use of tea and coffee, it is unnecessary to stop their use altogether, but they should be used in moderation.

A laxative diet will include fresh fruits. One kind or another can be had at all times of the year in most parts of the country. Cooked fruits, such as prunes, figs, apples, peaches, and apricots, may be freely eaten, but it is well to have fresh fruit, uncooked, at least once a day. Vegetables, especially the green ones, and whole-grain breads and cereals also have a laxative effect.

In addition to drinking liquids and eating laxative foods it is well to limit the amount taken of the foods that give the kidneys much waste to dispose of—meat and fish. Meat should be taken only once a day, and during the last two months of pregnancy less often. Eggs or cottage cheese may be substituted for meat several times a week.

IODINE

A small amount of iodine is necessary for normal growth and health. If this is not provided, the thyroid may enlarge and form a goiter. In certain regions, especially around the Great Lakes, in the Northwest, and in some of the eastern mountainous regions the water and soil have lost their iodine, so that foods grown in these localities may not provide the necessary amount. At least in these regions, throughout pregnancy, iodine should be given to prevent goiter in the baby as well as in the mother. Iodized table salt may fill this need. Its use or the taking of the iodine itself should be directed by a physician or the local health authorities.

COD-LIVER OIL¹

Cod-liver oil is excellent in many instances for the mother to take, not only during pregnancy but during the nursing period. It is of special value in climates without much sunshine and in the last six months of pregnancy when the baby's teeth are being formed. The amounts taken, however, should be regulated by the doctor.

¹ Viosterol is sometimes ordered by the doctor instead of cod-liver oil; it should never be taken except under a doctor's direction.

AVOIDANCE OF TOO MUCH SALT

The amount of salt commonly used in cooking is sufficient for the expectant mother. She should not add salt at the table.

SUITING THE DIET TO THE DIGESTION

No matter how generally suitable the diet, the mother and the baby are not getting its full benefit unless the food is properly digested. A healthful, happy life, with plenty of outdoor sunshine, enables the mother to use her food to the best advantage. She may find four or five small meals better than three large ones, especially in early pregnancy if she is troubled with nausea. Eating too much, eating in a hurry, or eating at irregular hours is harmful.

Every woman must realize that any food or drink which she does not digest should be avoided, though she should not omit from her diet any of the foods called the "dietary essentials" unless the doctor so advises. She may find certain meats and vegetables easier to digest than others, however, and it would be wise to leave out any that constantly trouble her. Early in pregnancy, if she is feeling nauseated, she may find that fats increase her discomfort; in this case she should cut down their amount at least for the time being. Fried foods or highly seasoned dishes may upset her stomach, and it is well during this period at least to prepare the foods in other ways.

AVOIDANCE OF CHOCOLATES AND RICH DESSERTS

Chocolates and rich desserts should be excluded from the diet to a great extent, especially if the expectant mother is gaining weight rapidly.

DANGER OF OVEREATING

The pregnant woman may eat freely but should at no time overeat. Overeating during this period is dangerous. The woman of average weight should not gain more than 20 pounds during pregnancy. The overweight woman will be better for gaining less, or not at all. Excessive increase in weight can always be stopped by the doctor through careful attention to details of the diet. A sudden marked gain in weight may be a danger signal and should be reported at once to the doctor.

CRAVINGS FOR INDIVIDUAL FOODS

Now and then an expectant mother wants to eat nothing except one or two articles of food. Such a craving should not be indulged, because the diet would be very unbalanced and inadequate. But

there is no reason why a craving for a particular food should not be satisfied in moderation if a balanced diet is being followed and the food desired is not harmful.

TOBACCO AND ALCOHOLIC DRINKS

The use of tobacco in any form should be greatly restricted, and alcoholic drinks should be avoided entirely.

EXERCISE AND REST

Daily exercise is important for health. The expectant mother should spend at least two hours each day (more if possible) in the open air and sunshine, and she should be getting some exercise during at least part of this time out of doors unless necessary household or other tasks have already tired her.

Violent exercise and excessive hard work should be avoided during pregnancy. Avoid reaching and lifting or pushing heavy things around. Most husbands will be glad to take over the heavier tasks during this time if they understand that this kind of work may injure the mother and the baby.

Less exercise should be taken at the time the monthly period ordinarily would be due, as there is more danger of miscarriage at this time. Marking these dates on a calendar will help the mother to plan a quiet life during these times.

WALKING AND OTHER OUTDOOR EXERCISE

A woman who has been used to an active outdoor life will probably be able to continue active exercise, but she should avoid very tiring and dangerous sports. If the mother has been used to a quiet indoor life, she should plan to take regular exercise and to take it out of doors, but she will find it wise to begin it very moderately. In pleasant weather walking is a valuable exercise. The length of the walk will depend on how soon the mother tires. It may be 2 miles or more if she is accustomed to walking; but if she finds that she is tired after half a mile, she should not try to go so far the next time. Easy gardening work is a good and a pleasant form of exercise; but it should be not a task that must be finished, but a diversion that may be stopped at will. If the day is too cold or too stormy for the mother to go out, she should take a walk on the porch or at least in a room with the windows wide open.

There is nothing that takes the place of outdoor life. Sunshine, besides being good for the general health, has a special value for the pregnant woman, because it enables the baby to make use of the

calcium (or lime) in the food for building bones and teeth. Pleasant open-air occupations strengthen the muscles, stimulate the sweat glands and other organs that get rid of the body's wastes, benefit the circulation, and help digestion and assimilation of food. The sights and sounds of the open, too, often take the pressure off overworked nerves.

AVOIDANCE OF STRENUOUS SPORTS

There is some tendency to-day, with increased interest in sports for women, to forget that a pregnant woman, though needing exercise, must build up her strength, not tear it down. Some sports that she may have been used to are too strenuous for her when pregnant and may cause miscarriage. Golf may be indulged in moderately during the first half of pregnancy. Bathing and swimming also are permissible during the first half if the water is not too cold and if there is no chilling or other unfavorable effect; diving and stunt swimming should not be permitted. Horseback riding and tennis are to be forbidden. Motoring over rough roads or for long distances should be avoided if possible. Driving an automobile involves an additional risk and should be done moderately and cautiously. A long railroad trip or a long sea trip may cause a miscarriage or a premature delivery; journeys should be avoided unless absolutely necessary.

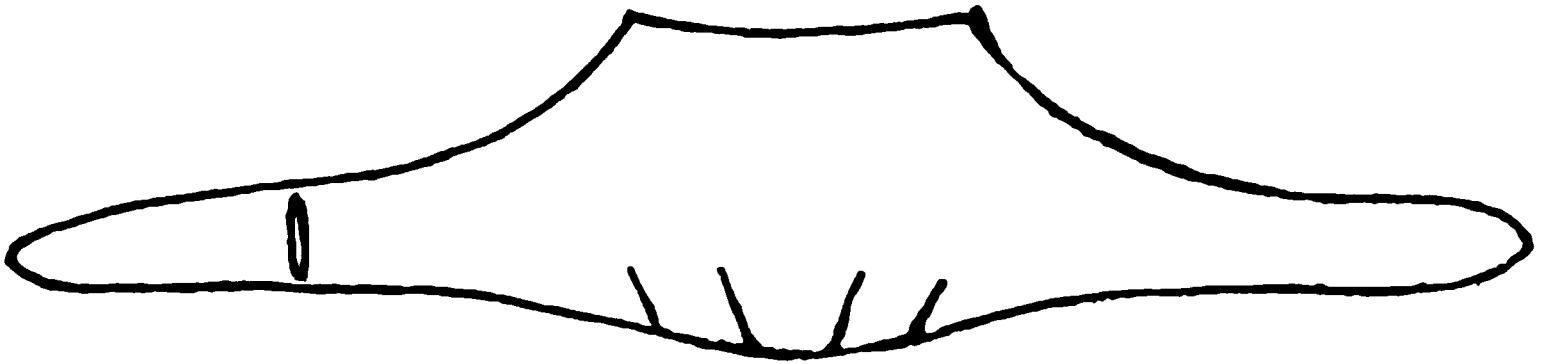
Exercise should be taken in some form throughout pregnancy under the direction of the physician. It should never be carried to the point of fatigue.

IMPORTANCE OF FRESH AIR

Fresh air, day and night, is required by all persons if they are to be healthy. None needs it more than the expectant mother, who breathes in from the air the oxygen for herself and the baby. She should sleep with the windows open or out of doors at all seasons of the year. In the living rooms, too, the air should be kept fresh, even in cold weather.

ADEQUATE SLEEP AND REST

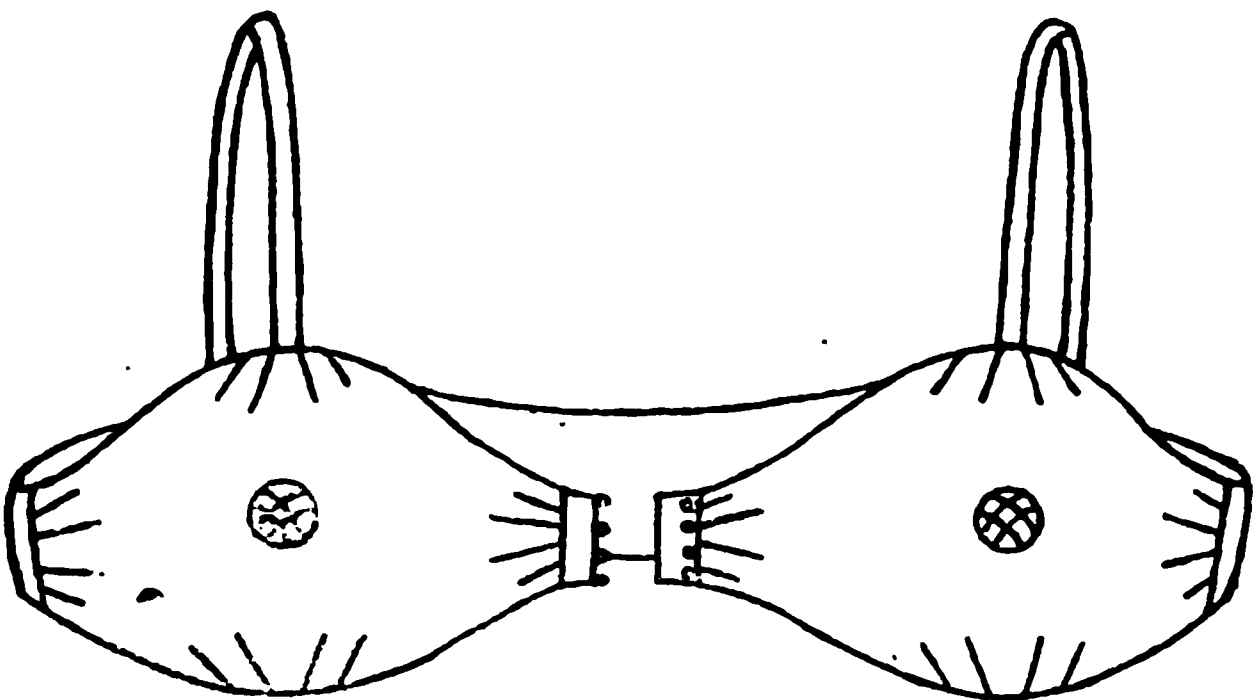
Every pregnant woman should have at least eight hours' sleep at night and an hour's nap or rest lying down during the day. Many women may think that they have no time for this rest period; but it is essential to health during pregnancy, and they will find that it enables them to do their work to better advantage.



Abdominal binder

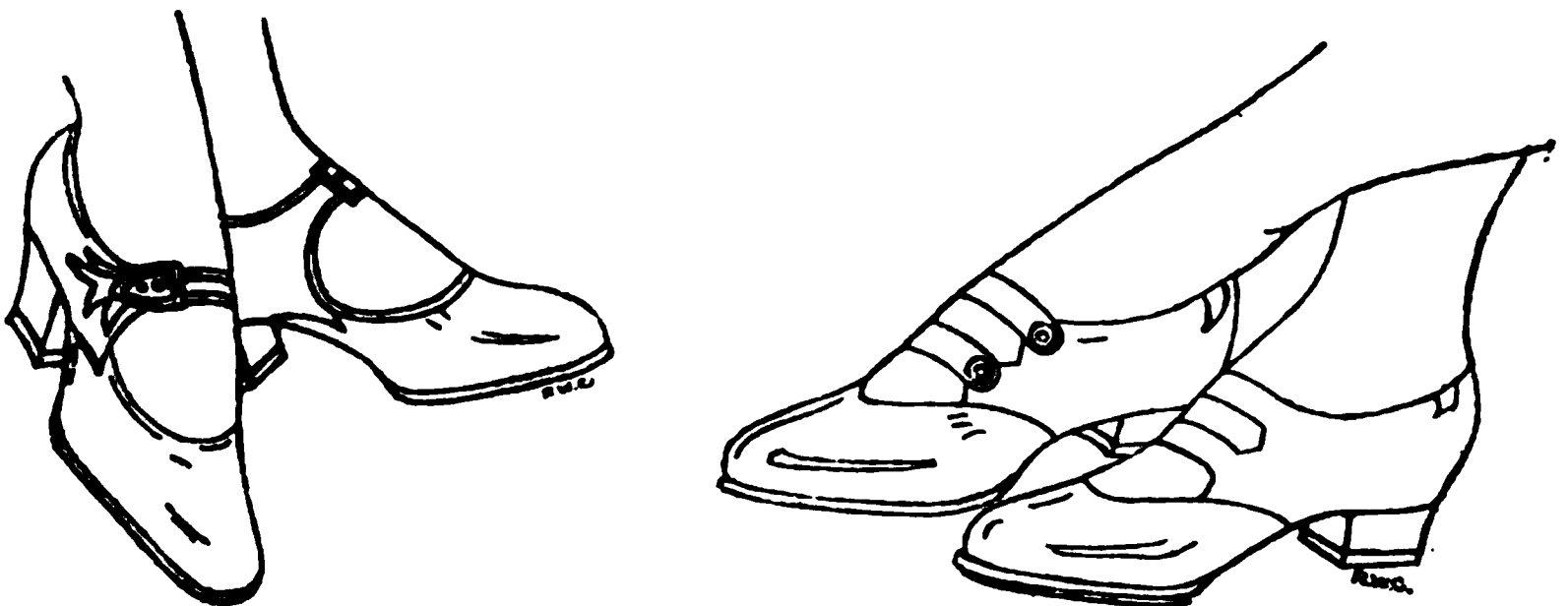
CLOTHING

The clothing worn by the expectant mother should be loose enough not to interfere with the breathing, the circulation, or the increase in size of the baby. It should hang from the shoulders,



Brassière that supports the breasts

not from a waistband, and should be as light in weight as it can be and still be warm enough in winter. She should wear sufficient clothing in cold weather to keep her comfortably warm, for it is



Two styles of suitable shoes with low, broad heels

important that she avoid getting chilled. The amount needed to make her comfortable will vary with the individual and will also depend upon the climate, the season, and the extent to which the

house is heated in cold weather. In an evenly warm house or apartment much lighter clothing may be worn with comfort and safety.

DRESSES

Dresses for the pregnant woman can and should be attractive as well as practical. The present-day dresses hanging from the shoulders can be readily adapted by means of tucks, pleats, or buttons and loops to allow for growth about the waist and hips. The dress should be worn with a slip and a one-piece undergarment that will vary in weight with the season.

BRASSIÈRES

A brassière or breast binder may be worn that will support the breasts but not flatten them. It should be loose over the nipples. A good model is shown on page 15.

CORSETS OR ABDOMINAL SUPPORTS

Maternity house dress A maternity corset or an abdominal support relieves back strain and usually makes the mother more comfortable. An abdominal support may be made of two thicknesses of muslin, with darts as needed to make it fit the abdomen. (See illustration on page 15.)

GARTERS

Round garters or any tight bands should not be worn, for they interfere with the circulation. Side garters may be attached to a waist hung from the shoulders, or to a belt that rests on the hip bones, or to the abdominal support.

SHOES

Shoes should be comfortably large and have low, broad heels. High heels should not be worn. They are dangerous not only because they may cause tripping and falling but because they throw the body out of the natural position and put undue strain on the muscles of the back.

Maternity street dress

CARE OF THE BOWELS

The body casts off waste material through the bowels and the kidneys, the lungs, and the skin. These are called the excretory organs. They have extra work to do during pregnancy and should be kept in the best possible condition to do it.

Many women suffer more or less from constipation during pregnancy. There is a tendency to constipation from the pressure of the enlarging uterus on the intestines; but this tendency can usually be overcome by proper health habits, drinking plenty of liquids, eating laxative foods, and taking regular exercise. Throughout pregnancy it is most important that the bowels should move freely at least once a day. Try to form the habit of emptying them, or trying to empty them, at the same hour each day. This should be done without fail, whether the attempt is always successful or not. Drinking plenty of water is important; a glassful just after getting up and just before going to bed may help. A laxative diet (see p. 10) will include considerable fruit, raw or cooked; plenty of fresh vegetables, especially the green ones, eaten with olive oil; and the dark-colored breads and cereals. The roughage in these "whole-grain" breads and cereals increases the activity of the intestines. Too much of it may cause colicky pain in the abdomen; and if this occurs, the amount of these foods should be reduced.

If, in spite of all these health measures, the expectant mother is still troubled with constipation, she should see her doctor. No medicines or enemas should be taken except upon his advice.

CARE OF THE KIDNEYS

In order to know whether the kidneys are performing their functions normally, the expectant mother should measure the quantity of urine passed in 24 hours and should take a specimen of it to the doctor for examination. If there is less than 3 pints, she is not drinking enough fluid; if the color is dark amber, she is probably not drinking enough water. Certain more serious conditions of the kidneys can be found only by chemical tests. That is why it is important for the doctor to make these tests regularly.

The method of collecting a 24-hour specimen of urine is as follows: Use a perfectly clean and scalded vessel or jar with a cover. Put in a teaspoonful of boric-acid crystals to keep the urine from decomposing. Beginning at some convenient hour in the morning, say 8 o'clock, empty the bladder and throw the urine away. Thereafter empty the bladder into the jar each time until the next morning at

the same hour. Keep the jar tightly covered and in a cool place. Measure the amount of urine passed and, after shaking it well, fill a perfectly clean 6-ounce bottle, cork tightly, label with the name, date, and quantity passed in 24 hours, and take it at once to the doctor.

BATHS AND CARE OF THE SKIN

The skin should be kept in good condition at all times and especially during pregnancy, when the work of the excretory organs, of which the skin is an important one, is increased. In order to keep the skin in health, the entire body should be washed every day. A brisk rubbing of the body with a rough towel after the bath stimulates the circulation. The bath may be a sponge, shower, or tub bath, except that the tub bath is not safe near the end of pregnancy. A morning bath in cool water is a more effective stimulant, but the warm bath is necessary for the thorough cleansing of the skin. Warm baths, with soap, should therefore be taken two or three times a week, even if the cool bath is taken regularly in the morning.

A pregnant woman should never take a very hot bath. If she has been used to the daily cold bath, there is no reason why she should give it up at this time, provided she feels a healthy glow afterward; but she may find it advisable to have the water cool, rather than cold.

Taking a tub bath when labor begins is dangerous and should never be done. Germs in the water may enter the birth canal and cause blood poisoning. There is some slight danger of such infection even before labor begins.

CARE OF THE TEETH

A mother's responsibility for the teeth of her baby begins long before he is born. The baby's teeth begin to form as early as the third month of pregnancy. All of the first set of 20 teeth are in the jaw at birth, and the quality of these teeth as well as the formation of the jaw, therefore, is determined largely in the prenatal period. Later, if the baby is fortunate enough to be nursed at the breast, he will be preparing the way for well-spaced regular teeth. Nursing tends to strengthen the muscles of the jaw and to widen the dental arch. The substances needed to build teeth are mineral salts (lime and phosphorus) and certain vitamins. The baby will take them from his mother's body if he does not get them through her food; but the milk, eggs, fresh vegetables, fruits, and whole grains that the expectant mother is taking are the very foods that supply these materials for the teeth. Outdoor sunshine and cod-liver oil help to utilize these food materials for the baby's growing teeth and bones.

The old saying, "For every child a tooth," shows only that in the past expectant mothers did not have the proper food. For it is true that in case of food shortage or a poor selection of food the mother suffers first. But if she is on an adequate diet and is under the care of a good dentist, the old saying need no longer be true.

It is true, however, that during pregnancy the mother's teeth will be especially affected by any deficiency in diet and are thus peculiarly susceptible to decay during and just after this period. For these reasons it is essential for every woman, as soon as she knows that she is pregnant, to go to a good dentist and have such repairs made to



Sunshine and fresh air

her teeth as are needed and to receive instruction in mouth hygiene. In addition to this, the teeth should be brushed after each meal and the mouth well rinsed. This brushing should be from the gums toward the biting edge and not crosswise. Excellent washes for the mouth are made with a teaspoonful of milk of magnesia or a tablespoonful of limewater, or half a teaspoonful of baking soda mixed with a glassful of water.

CARE OF THE BREASTS

It should be the hope, as it is the first duty, of every mother to nurse her baby. Breast milk is the natural food for the baby. It is

easily assimilated, cheap, clean, and convenient. Breast feeding gives a baby a much better chance for life and for steady, normal growth.

In preparation for this function, all the healthful measures already set forth will play an important part. The mother can help further in this preparation by seeing to it that the breasts themselves are in the best possible condition. By wearing loose clothing she allows them plenty of room to develop; a tight brassière may do harm by preventing free circulation. The breasts and nipples may require special attention. The doctor will examine them to see if special treatment is necessary. If a little dried scale appears on the nipples, do not pick it off. Rub a little cold-cream ointment over them carefully at night to soften the crust, which will probably be washed away by the bath. If the cold cream does not soften the scale, ask the doctor what to do.

INTERCOURSE DURING PREGNANCY

Intercourse during the early months of pregnancy is a frequent cause of miscarriage. The danger is increased if the intercourse takes place at what would be a monthly period were the woman not pregnant. During the last three months intercourse should be forbidden, because it may bring on labor ahead of time. If intercourse takes place shortly before labor begins, blood poisoning (septicemia) may follow with very serious results. It is, therefore, advisable to limit the frequency of intercourse during the first six months of pregnancy and to stop it entirely during the last three. Intercourse should also be avoided for the first six weeks after delivery.

MENTAL HYGIENE

How the expectant mother can keep her body in proper condition to produce a healthy baby has been pointed out in the foregoing sections. She needs also to keep her mind healthy. Confidence, contentment, a happy anticipation of the new life that will be hers to guide, and a cheerful acceptance of this responsibility—these are the signs of mental poise.

The mother will keep this poise much more easily if she and her husband are working together to make their home world a happy place for the baby to be born into. The prospective father can help by showing that he wants to help. Then he can speak gently and not claim the privilege of being cross because he has come in tired from his day's work. Pregnancy is not a disease, but it is "nature under a strain"; and the strain may show itself in overwrought nerves if there is jangling instead of peace in the family. There will be many things for the father and mother to talk over in the

evenings and decide: That their baby will be breast fed because that will give him a better chance for life and health than the artificially-fed baby has; that their baby will be trained in the right habits from birth; that they will work together, as they must, to give him the right habits and a happy and harmonious home.

How can the mother spend her day so that she will be ready for such a quiet, happy evening? Her two hours or more in the open air and sunshine will help her mentally as well as physically. They will help her all the more if she can arrange to get them without hurrying her household or other tasks and getting nervous over finishing them in time. Perhaps the need of these hours of freedom will make her think out some way to do her work that will take fewer steps and less time, and thus will allow for her hour's nap or rest lying down as well as her time out of doors. Recreation, so long as it does not tire her, is necessary for her well-being.

The greatest enemies of mental health (and you can not have physical health unless you have mental health) are worry, nervousness, fears. The mother should not worry if she has pain she can not account for; she should tell the doctor, and he will explain how to relieve it or remove the cause. She should not think of herself as an invalid just because she is pregnant, nor should her friends. She is to be envied, not sympathized with. Above all, she should not be afraid for herself or for the baby.

Some women are afraid that their babies will have "birthmarks" or "maternal impressions." By a "maternal impression" is meant an injury to the child through the influence of some harmful state of mind in the mother. In other words, there is a widespread feeling that if a mother is injured or sees some one injured or sees something especially repulsive to her, her baby will be "marked." But there is no connection between the nervous system of the mother and of the unborn baby, and such "maternal impressions," as these alleged injuries to the baby are called, are absolutely impossible.

A mother may harm the baby, however, by failing to plan her own life, physical and mental, in the way that will result in the highest degree of health and happiness for herself and, therefore, for the child. Nervousness and fears may affect her ability to nurse her baby. Steady nerves and mental poise and the earnest desire to give her baby this advantage will help her to do so. It can not be emphasized too much that pregnancy is not a disease but is frequently a pathway to better health.

HOME OR HOSPITAL FOR THE DELIVERY

It is becoming more and more common for women to go to hospitals to be delivered. If a hospital is chosen, it should be one that is well equipped to handle obstetrical work and that provides for the separation of maternity cases from all other patients in the hospital. Otherwise it has no advantage over a woman's own home. A well-equipped and well-conducted hospital has many advantages over a private home. It may be cheaper, it is far more convenient, and, if any emergency arises, it is much safer for both mother and baby. In many parts of the country no hospitals of any sort are near enough to be used, and the majority of women must necessarily be delivered at home. By careful examination the doctor can usually tell by the eighth month whether or not a normal delivery is to be expected. If he expects an abnormal delivery or if by this time he is still in doubt, he will probably arrange to send the woman to the nearest and best hospital available. The delivery may turn out to be easier than he had expected, but it is much better to go unnecessarily to a hospital than to be delivered at home with unfortunate results.

Hospital charges in the various parts of the country vary greatly. The private physician's fees are in addition to the hospital charges, and not infrequently the baby's laundry must be provided for outside. In most cases the routine care given by the floor nurses will be sufficient; if a special nurse is employed, the cost is much increased, for her salary is never included in the hospital rate. It would be well to have a definite understanding beforehand as to the cost of the physician, the hospital, and the nurse.

afterwards it makes the nursing care much easier. Placing a board across the bed under the springs prevents the bed from sagging and is of much help at the time of delivery. The bed should be in a good light by day and well lighted at night. Two small tables are useful; but if they can not be had, chairs may be used in their place. It is not necessary to take draperies down; but it is well to take out unnecessary furniture and to protect the floor and the floor covering.

SUPPLIES FOR THE MOTHER

The supplies considered necessary for a delivery at home vary greatly according to the mother's finances. The following list contains the supplies that it is advisable to have, but even this list can be cut if necessary:

1½ yards of rubber sheeting at least 36 inches wide, or 1½ yards of white table oilcloth to protect the mattress.

4 clean sheets and 4 pillowcases.

Receiving blanket for the baby (a piece of old clean blanket about a yard square or a soft bath towel).

4 delivery pads. To make one, take 12 opened-out sheets of newspaper and cover them with white cheesecloth with edges turned in and basted. They are better if they are padded with a 2-inch layer of absorbent cotton on top; but the cotton need not be used if this makes them too expensive. Iron the pads with a hot iron until they are scorched slightly, fold them top side in, and put them away in a clean pillowcase.

Supply of newspapers.

2 pounds of absorbent cotton.

2 enamel basins 10 inches in diameter.

2 pails with covers. (These can be used after the delivery for diapers.)

Bed pan.

1 stewpan with handle (2-quart size).

1 pair of scissors.

1 skein of bobbin (narrow cotton tape) or strong cotton string to tie the cord.

4 yards of unbleached muslin for abdominal binders.

4 ounces of tincture of green soap.

4 ounces of boric-acid crystals.

Castile soap.

Tube of plain white petroleum jelly.

2-quart fountain syringe or enema can (with rectal tip).

Hot-water bottle.

2 glass drinking tubes.

2 dozen safety pins, size 0.

2 dozen safety pins, size 4.

2 nail brushes, stiff and cheap.

2 wash cloths.

1 dozen hand towels.

3 nightgowns (either low enough in the neck to allow for nursing or opening down the front).

1 pair white stockings.

10 yards of gauze for making sanitary pads, "sponges," and dressings.

The towels and the following articles are to be sterilized and put away until the time of delivery:

- 2 dozen sanitary pads. These may be bought ready made or may be made at home of absorbent cotton wrapped in gauze or in old soft cloths that have been washed and boiled. Cut the cotton into pads 10 inches long, 4 inches wide, and 1 inch thick. Cut the gauze into pieces of the right size to fold around the cotton, and allow it, when folded, to extend 2 or 3 inches beyond the cotton at each end.
- 1 dozen gauze "sponges." Take a piece of gauze 16 by 16 inches; fold edges to center; fold again; bring raw ends to center; fold again, making a finished sponge about 4 inches square.
- 5 dozen cotton pledgets. Take a piece of absorbent cotton the size of an egg; make it into a ball; twist the loose end. Put them into five muslin bags.
- 1 dozen gauze squares (4-inch size) for cord dressings. Make like the "sponges," then cut a hole the size of a quarter in the center of six of them.
- 1 yard of bobbin (very narrow tape) or strong white cotton string. Cut this into four pieces, each 9 inches long, to use in tying the cord. Put these and four of the gauze squares, two with and two without holes, into a muslin bag.

In many parts of the country the visiting-nurse associations have sterilized delivery pads at their central offices, which they sell to the mother at cost. Surgical-supply houses in the large cities also put up these sterile supplies. Some of the State departments of health sterilize obstetrical packages that are sent to them for this purpose. The mother should buy these supplies only from sources that she knows to be reliable, preferably on the recommendation of her doctor, for it is of the utmost importance that these supplies should be thoroughly and recently sterilized and well packed.

HOW TO STERILIZE THESE ARTICLES

Wrap the sanitary pads, towels, and the sponges in packages of six each, and the remainder of the gauze squares in muslin and fasten with common pins. Put these packages and the muslin bags (five containing the cotton pledgets, the other the four cord ties and four gauze squares) into a pillowcase. Use a large wash boiler with a cover. Put water into it to a depth of 6 inches. Suspend the pillowcase containing the dressings in a hammock made from a towel or a piece of muslin (the hammock must not touch the water). Attach the ends of the hammock to the handles of the boiler. Wrap a cloth around the cover so that the cover will fit tightly. Steam an hour. Dry in the oven or in the sun by pinning the bag to a clothes-line. Repeat the process the following day. Dry thoroughly. Put the pillowcase away, unopened, until the articles are needed. If these articles have

Sterilizing delivery supplies

been sterilized more than a month, they must be sterilized again. The mother's nurse or the public-health nurse will explain to her the details of preparing and sterilizing these supplies.

SUPPLIES FOR THE BABY

The following list contains the articles it is well to have for the baby. A few of these could be omitted if all can not be had:

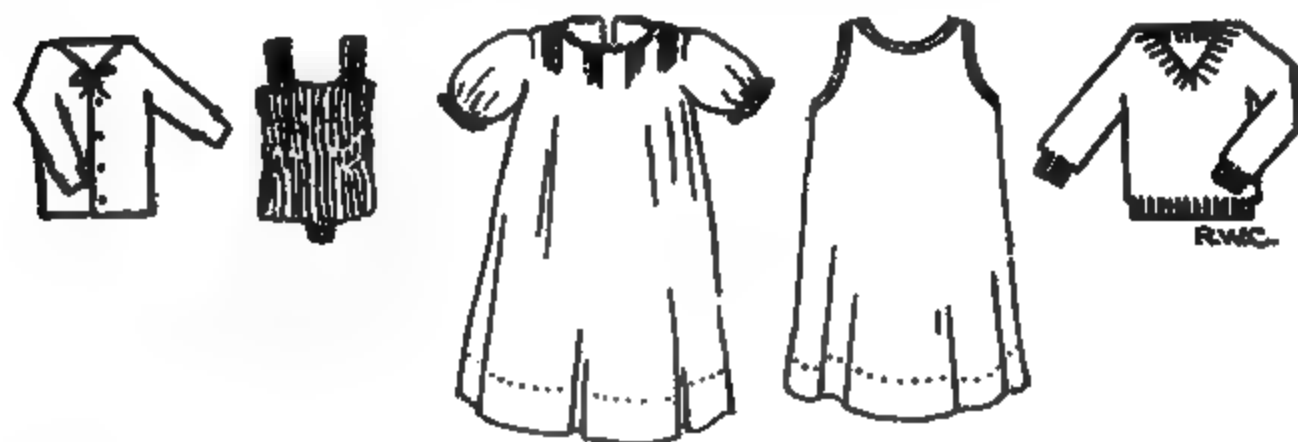
- 1 bassinette, basket, or box for bed. A clothes basket makes a good bed. A basket or box that can be moved about readily is a great convenience.
- 1 blanket, felt pad, or pillow for mattress. Table or bed padding, folded a few times, makes a very soft, smooth mattress and has the advantage over the ordinary mattress that it may be washed and boiled and dried in the sun.
- 2 small warm blankets.
- 3 small sheets or pillowcases.

R.W.S.

Small baby's wrap and basket bed

- 2 soft towels.
- 2 soft wash cloths.
- 1 piece Castile soap.
- 6 ounces of olive oil or liquid petrolatum.
- 3 binders (canton flannel) 6 by 27 inches, with edges plinked, not hemmed; used to keep the cord dressing in place. After the cord comes off and the navel is healed, a band with shoulder straps is the only garment worn under the shirt. Binders are usually supplied by the hospital if the baby is born there.
- 3 knitted bands, size 2. These are made with a bodice top (a straight top with shoulder straps) and slip on over the feet. The bottom edge is reinforced all the way around, so that the diaper may be pinned in any position. If size 2 is too big at first, a tuck can be taken in the top of each shoulder strap.
- 48 diapers 24 by 24 inches.
- 3 shirts, size 2—for summer, made of light-weight cotton; for winter, of cotton and wool or silk and wool.

- 3 petticoats, or gertrudes, 20 inches long finished, made of muslin (not needed except for the sake of appearance with thin dresses). These may open on the shoulders so that they can be slipped off if soiled without removing the dress, or they may open down the back, like the dress.
- 3 dresses, 31 inches long finished. These may be made from a nainsook or a fine quality of crinkle crêpe which does not need to be ironed. They should open all the way down the back so that they can be pulled off from under the baby.



Baby's clothes

- 3 flannel or knitted squares 36 by 36 inches, which can be used instead of coat and bonnet for the very young baby. (See illustration p. 26.)
- 1 coat and bonnet, simple and washable.
- 3 nightgowns, 27 inches long finished, made of muslin or flannel according to the season. These open down the back. Tape should be run through the bottom hem to draw it together.

Baby's toilet tray

The baby's toilet tray varies with the mother's individual wishes even more than the list just given. It should contain three covered jars (jelly glasses or mayonnaise jars will do), one for boiled water, one for rubber nipples, and one for cotton swabs; two flat dishes, one for the soap and one for the oil; a pincushion; and a nursing bottle for drinking water.

ADDITIONAL CONVENIENCES

Below is a list of additional articles that will be found convenient in the care of the baby, though not so essential as those previously listed:

Bathtub—tin, enameled ware, or rubber.

Drying frames for shirts and stockings.

Bath apron of Turkish toweling or outing flannel.

A low chair without arms.

Baby scales.

A low screen to protect the baby while he is being bathed.

A low table on which to bathe and dress the baby.

COMMON DISORDERS OF PREGNANCY

NAUSEA AND VOMITING

Nausea with or without vomiting is one of the common ailments of early pregnancy (from about the fourth to the twelfth week). It is very apt to come in the morning, and for that reason is often called "morning sickness," although not infrequently it comes only in the late afternoon or early evening. Many women do not have it at all. If there is more than slight occasional vomiting, the doctor should be consulted. Eating six small meals a day instead of three larger ones helps to relieve this nausea. Taking something to eat before getting up, such as toast or crackers, will often help. No one method of treatment works satisfactorily with all women. Therefore the physician must decide what is best for each individual.

HEARTBURN

Not infrequently during pregnancy the expectant mother complains of burning in the throat caused by bitter eructations (belching) from the stomach. This condition is commonly called "heartburn." If it continues, the doctor should be notified. Frequently heartburn is evidence that the diet contains too much sugar and starches; the doctor will get further evidence on this point if he finds sugar present when he analyzes the urine.

VARICOSE VEINS AND PILES

As the weeks go by, the enlarging uterus presses more and more on the blood vessels in the lower abdomen, and in many instances the veins of the leg appear as bluish lines. These are called "varicose veins." Later as they enlarge they may cause slight burning or tingling sensations in the legs. If the symptoms remain slight, no treatment is necessary. If they become more marked, lying down for an hour morning and night with the legs elevated or at right angles to the body may give relief. The doctor's attention should be called to these varicose veins, and he will direct any necessary treatment.

When the varicose veins appear in the rectum, they are called "hemorrhoids," or "piles." These again are due to pressure; and if any discomfort is felt at the anus the doctor must be told at once so that he may direct appropriate treatment.

CRAMPS IN THE LEGS

Cramps in the legs, usually after the mother has gone to bed, may occur in any part of the pregnancy, but they are more apt to come in the latter half. Relief may be given by gentle massage of the legs or by bending the foot up on the ankle.

RELAXATION OF THE PELVIC JOINTS

As pregnancy advances, the three joints which go to make up the pelvic girdle, two behind and one in front, oftentimes relax to such an extent that severe pains are felt in the legs. An abdominal support, such as has been recommended (see p. 15), will do much to relieve this condition.

LEUCORRHEA

Leucorrhea (whites) is a whitish discharge from the vagina. This discharge comes from the glands in the neck of the uterus and the entrance to the birth canal, which are more active than usual because of pressure of the enlarging uterus on the blood vessels. Leucorrhea is often annoying but not usually serious. The physician should be told of it, and he will prescribe the necessary treatment. Douches of any sort should not be taken except under his advice.

COMPLICATIONS OF PREGNANCY

TOXEMIA

As the baby grows in the uterus there is being sent back into the mother's blood an increasing amount of waste matter. If the mother's elimination is imperfect, so that she has difficulty in getting rid of her own as well as the baby's waste products, a toxic, or poisoned, condition may result which will be more or less serious for both the mother and the child. Some of the common symptoms are:

- (1) Serious or persistent vomiting.
- (2) Repeated headaches.
- (3) Dizziness.
- (4) Puffiness about the face, hands, and legs.
- (5) Blurring of the vision, or spots before the eyes.
- (6) Neuralgic pains, especially about the pit of the stomach.

Having one or even more of these symptoms does not necessarily mean that toxemia is present, for in many cases the cause of the trouble may be removed very easily without serious results. But when such symptoms appear, they should always be brought at once to the attention of the doctor, and it will be well also to send a specimen of the urine to him immediately. Prevention of serious results from toxemia by observing and reporting to the doctor the symptoms which precede it is of great importance to all pregnant women.

There is an unfortunate tendency among women to regard some of these disturbances as a necessary part of pregnancy. No pain or distress that can be prevented by proper means should be endured during pregnancy or at any other time. There is no truth in the old saying that a "sick pregnancy is a safe one." If a pregnant woman will follow certain simple rules for health, she will not have cause to fear toxemia and will be in better condition to meet the strains of pregnancy and childbirth. She should—

- (1) Place herself under the care of a competent physician.
- (2) Consult him regularly, at least once a month during the first six months, then every two weeks or oftener, preferably every week in the last four weeks of the pregnancy.
- (3) Have her blood pressure taken regularly.
- (4) Have her urine examined at the visits to the doctor.
- (5) Guard carefully against constipation.

- (6) Avoid a large amount of meat and any other form of over-eating and all extra salt.
- (7) Drink eight glasses of water a day.
- (8) Exercise daily out of doors but not to the point of fatigue.
- (9) Keep all the rooms of the house well ventilated day and night.
- (10) Bathe every day.
- (11) Wear lightweight but warm and comfortable clothing.
- (12) Sleep at least 8 hours out of the 24, rest during the day, and not get overtired.
- (13) Report to the doctor all acute illnesses, especially colds, sore throat, or persistent cough.
- (14) Go to the dentist early in pregnancy.
- (15) Report any unfavorable symptom, remembering that she must at all times be well.

MISCARRIAGE

“Miscarriage” is commonly used to mean the birth of the child before it is sufficiently developed to be able to live outside its mother’s body—that is, before the end of the sixth month of pregnancy. There are many possible causes of this mishap. Among them are heavy work (such as washing, sweeping, lifting, or moving heavy furniture), running a sewing machine or other form of taxing labor, strenuous indulgence in amusements that jar the body (such as dancing, skating, tennis, golf, horseback riding, or climbing), or jolting over rough roads in an automobile, or long journeys by train or boat. Some constitutional disease of the mother, a fault in the position of the uterus or some abnormality of its lining, or intercourse during pregnancy (see p. 20) may cause miscarriage. Microscopic examination of tissues thrown off from early miscarriages has shown that many are due to faulty development of the fetus (unborn baby); such miscarriages are nature’s way of getting rid of a pregnancy that could not go on to final success. In many cases the cause is impossible to discover, and a woman may have repeated miscarriages. The prevention of many miscarriages lies in guarding against overexertion in the early weeks of pregnancy. If a woman has had a miscarriage before, a long stay in bed may carry her past the danger when nothing else will do it.

Syphilis is often the cause of miscarriages, but as yet it has not been proved that it causes miscarriage in the first two months of pregnancy.

Any woman who has had repeated miscarriages or premature labors with dead babies should have a blood test (Wassermann) to find out whether she has syphilis. This test should be part of the doctor’s complete examination of every expectant mother; it is of special importance for the mother who has had a previous miscarriage of

which she does not know the cause. The blood for this test is easily withdrawn from the arm. If it shows that the mother has syphilis, treatment should be started at once and kept up systematically throughout pregnancy. If she receives proper treatment, a syphilitic mother will give birth to a healthy baby.

At the first appearance of bleeding or abdominal pain the mother should go to bed at once. It is always advisable to send for the doctor; it is urgent to do so if the pregnancy has advanced beyond the sixth week. If the mother can not get the doctor, she must remain perfectly quiet in bed for at least 48 hours after bleeding or pain has stopped. A miscarriage occurring before the sixth week may appear as nothing more than an unusually severe menstrual period.

What happens is that the placenta and membranes which surround the fetus have become loosened from the uterus. If the loosening is slight, complete rest in bed may prevent it from going further. If a large part of these membranes, however, has become separated from the uterus, the separation will become complete and the fetus will be expelled. It is not until the twelfth to the fourteenth week of pregnancy that the union between these membranes and the uterus becomes firm; consequently it is during these early weeks that miscarriage is most likely to occur.

When a miscarriage has occurred, there is danger that portions of the membrane may stick to the uterus and not be expelled. In order to find out whether this is the case, it is important that a doctor should be in attendance and that whatever has been expelled be saved for him to see.

A neglected miscarriage may mean the total loss of health; a spontaneous miscarriage properly attended is not likely to have bad results. On the other hand, a self-induced miscarriage may result in blood poisoning and death. It is unreasonable to regard a miscarriage as something to be concealed, and dangerous to deprive oneself on this account of proper care and treatment. This unhappy way of regarding a miscarriage is perhaps partly due to the association in many persons' minds of a miscarriage with a criminal abortion, the results of which are often serious and many times fatal. Such an attitude of mind is unjustified, for there are many causes of miscarriage, and often, humanly speaking, it is unavoidable. It should be treated like any other illness, and such measures should be taken as will best conserve the future health of the disappointed mother.

BLEEDING IN PREGNANCY

Bleeding, or the show of blood from the vagina in a pregnant woman, demands investigation, for it never occurs in normal cases. It may be a very serious sign, especially if it occurs in the latter part of pregnancy. It always must be regarded as serious until the doctor by careful examination determines that it is not. At the first sign of blood from the vagina a pregnant woman should go to bed and should notify the doctor at once. Under no circumstances should a woman who has had vaginal bleeding be up and about her house attending to her household. It can not be overemphasized that bleeding from the vagina in pregnancy is abnormal and may be a very serious complication. The responsibility for good results when bleeding has occurred is twofold: (1) Upon the patient—she must report it to her physician at once; (2) upon the doctor—he must respond without delay, determine the cause of the bleeding, and give the proper treatment.

BIRTH OF THE BABY

At the end of the nine months' development in the uterus the baby is born, and the act of birth is called "labor." This act is a natural one and, though it is painful and tiring, it should end normally with a healthy mother and a healthy baby. It probably will have this happy ending if the mother has had proper care during her pregnancy and is in the hands of a competent attendant who understands the need for perfect cleanliness and uses every means to secure it.

PRECAUTIONS THAT MUST BE TAKEN

The prevention of the infection that causes puerperal septicemia, or "childbed fever," lies in the scrupulous care taken by everyone who is concerned in any way with the attendance upon a woman in childbirth to allow nothing not absolutely clean to touch her. Puerperal septicemia is a largely preventable disease, since its cause and the measures necessary to prevent it are well known, and all women in childbirth and their families have a right to insist upon this protection. No physician who values his professional reputation will be satisfied to neglect any of the precautions against this most dreadful disease. The patient can help by having ready clean bedding, towels, and sterile supplies. The woman, the family, and the nurse must be ready in every way to aid the physician in this effort.

The well-trained doctor *insists* that the external parts be shaved when the patient goes into labor. This shaving is for the patient's protection and does much toward the prevention of blood poisoning. The doctor can obtain much information as to how soon the baby will be born by rectal examinations, and the patient should never refuse to permit them. Vaginal examinations during labor, no matter how carefully done, always carry a certain amount of risk. When the physician exposes the patient during the actual delivery of the baby, the patient must realize that he is working in her interest and for her protection.

LABOR

The progress of labor is divided into three stages. The first is occupied with the dilatation, or enlargement, of the mouth of the uterus, the second with the actual birth of the child, and the third with the separation and throwing out of the afterbirth and membranes.

The first stage is the longest and most trying part to the expectant mother. During this time the mouth of the uterus, which is less than one-quarter of an inch in diameter at first, must increase to $3\frac{1}{2}$ to 4 inches before it is large enough to permit the child's body to pass out. This stage usually takes a number of hours and is very tedious to the woman, because she is unable to feel for herself that she is making progress. Labor pains may begin in the abdomen or in the back. They may come at first half an hour or an hour apart, or perhaps only a few minutes. They will come at shorter and shorter intervals and with greater and greater strength as the mouth of the uterus gets larger. Sometimes the bag of waters (amniotic sac) that surrounds the baby breaks before labor begins. At the time labor begins or shortly after there may be a slight blood-tinged discharge. This is commonly called the "show" and is more likely to appear in first labors than in later ones. The progress of labor can not be judged by the show alone. The regularity, the frequency, and the strength of the pains are the chief guides.

To pass the time between the pains, the woman may occupy herself in any way she likes: she may sit down, lie down, walk about, or even sleep, if she can. She should notify the nurse and the doctor as soon as she becomes convinced of the regularity of labor pains, or in case water in any quantity comes away before the pains begin, or in case of any bloody discharge. Since the doctor can not hasten the progress of this stage, it is not usually necessary for him to remain with her all the time. But he should keep close watch of the case and be always within easy call. No enema should be taken on the onset of labor except on the advice of the physician. If the woman is hungry, she may have some light food. As soon as the doctor comes, he will give advice on all necessary details.

The bed should be made ready, the mattress being protected by a rubber sheet or oilcloth or several layers of newspapers. An extra sheet, folded in the middle, is pinned across the bed under the mother's hips; this sheet may be drawn out after the labor, leaving the bed clean and dry.

If the confinement is to take place at a hospital, the woman should be ready to go when regular pains have started. The ride to the hospital will help to pass the time and may also serve to hasten the delivery to some extent. She will take with her a bag that should have been packed some time before, containing nightgowns, toilet articles, slippers, kimono, and the like, with the baby's first outfit.

The second stage of labor, in which the actual birth occurs, is much shorter than the first, usually from two to two and one-half hours. It is frequently less trying to the patient than the first stage, because as each pain occurs the muscles are pushing the baby

along the birth canal, and she feels that she can help by straining, or "bearing down." The amniotic sac is usually ruptured as the pains of this stage begin, and after this occurs it will usually not be long before the child is born. In case the bag of waters has broken earlier, as sometimes happens, the birth is said to be "dry" and may proceed somewhat more slowly. Whether the pain of the actual birth should be lessened or deadened by the use of an anesthetic will be decided by the physician.

After the baby is born the third stage of labor takes place—namely, the separation and throwing out of the afterbirth (placenta) and the other tissues that connected the baby's body with the mother during pregnancy. This occupies about half an hour. "Afterpains" are the pains that immediately follow the emptying of the uterus and are due to the natural contractions of its muscle fibers. These pains are less likely to be felt in a first confinement than in later ones.

EMERGENCIES

It sometimes happens that the baby is born before the arrival of the doctor or nurse, when labor comes on earlier than was expected, or the doctor is at some distance. In an emergency like this it is necessary for the expectant mother and her family to know what to do.

The delivery room must be set in order and the bed freshly made. The mattress should first be protected with the rubber sheet or oil-cloth, or newspapers, and the extra folded sheet as described on page 36. The mother's external parts should be well washed and shaved. The sterilized dressings, still in their packages, should be put close at hand. A large kettle of water should be boiled and cooled without being uncovered. At this same time the scissors for cutting the cord should be boiled for 10 minutes and left untouched.

Meanwhile, if matters have gone so far that the pains are returning every 5 minutes, or if the "waters" have broken, the woman should go to bed; she will lie on her back, with her knees drawn up and spread apart. (If the doctor is in charge, he may prefer another position.) When the pain comes, the patient will bear down but will not attempt to strain except when she feels she must. Whoever is at hand to help will then put one of the delivery pads underneath the mother's hips and should thoroughly disinfect the hands by scrubbing them for 10 minutes in warm water, using a brush and plenty of soap. The attendant will sit by the mother until the baby is born, but should not touch her. After the head is born, if the face of the baby turns blue, the mother should be told to strain vigorously, and at the same time she may press with both hands upon her abdomen, while the attendant grasps the baby's head and pulls it steadily but gently downward. This will shortly bring out the baby.

As soon as the child is born he should take a breath and cry. If he does not do this, the attendant should slap him smartly upon the buttocks, meanwhile holding him up by the feet for a moment. When he cries, he should be laid down close enough to the mother so that the navel cord will not be stretched, care being taken not to smother him nor allow any of the discharges to touch his face. Then the attendant will tie the cord twice, once 2 inches from the child's navel, once 2 inches nearer the mother, using pieces of sterilized bobbin or other string that has been boiled. The cord is then cut with the scissors between the two ties (ligatures). There will be a

single spurt of blood, but bleeding will cease immediately if the cord is tied tight. If bleeding from the baby's navel should not stop altogether, the cord should be tied again nearer the baby without disturbing the first tie. The cord dressing should be put in place at once. The baby should then be covered with a light, warm, and soft blanket, removed to a place of safety while the mother is being taken care of, and kept warm.

The separation of the afterbirth usually takes place within 10 to 30 minutes. Sometimes it takes as much as two hours, but the process must not be hurried, unless under the doctor's directions. Sometimes the mother can help by straining as she did to bring the child; but unless the doctor or nurse has arrived it is better to be patient and wait for the contents of the uterus to be expelled naturally. All the soiled pads and dressings and everything that has been expelled should be saved for the doctor's inspection.

After the soiled pads have been removed, the region around the vagina is carefully washed with sterile warm water, pieces of sterile gauze or cotton pledgets being used for this purpose. An abdominal binder and one of the sanitary pads are then put on. All the soiled dressings are removed and the pad beneath the mother renewed. If, after all is over, the mother suffers from a nervous chill, as often happens, she need not be alarmed. A hot-water bag at her feet, a glass of hot milk, and a blanket will soon warm her, and she will usually be ready to fall asleep to rest after the fatigue of the labor.

There is always a considerable discharge of blood just after the birth. The attendant can help to stop this bleeding. Sitting on the bed, facing the foot of the bed with the hands on the mother's abdomen, she will feel for the uterus, which will be a rather large, soft mass just under the navel, and will massage it gently, passing the thumb over the front of the organ, while the fingers surround it. This will cause the muscles of the uterus to contract and will help to stop the bleeding. The massage should be begun gently, as soon as the child is born. Then the uterus will stay very tightly contracted and firmer to the touch, and in the long run a great amount of blood will be saved. While the attendant is caring for the baby, either the mother herself can be rubbing the lower abdomen or someone else in the family can help temporarily. Cracked ice, wrapped in gauze, may be laid over the uterus to help in the contractions, and sometimes putting the baby to breast will serve the same purpose. These measures are especially necessary if the amount of bleeding seems excessive and the doctor has not arrived.

When the doctor comes, he will repair any lacerations (tears) that may have occurred during the baby's birth.

FIRST CARE OF THE NEWBORN

Immediately after the baby is born his eyes should be carefully wiped free from mucus or blood with the pledgets of sterile clean absorbent cotton which were prepared beforehand. (See mother's supplies, p. 24.) A separate piece of cotton should be used for each eye and should be discarded as soon as it has been used once. Wipe from the nose outward without opening the lid. At this time also the lips and nose should be wiped clean and the nurse's or doctor's little finger, wrapped with a piece of moist cotton, should be passed into the child's mouth and any accumulated mucus removed by an outward sweep of the finger.

NITRATE OF SILVER FOR THE BABY'S EYES

As soon after birth as possible the eyelids should again be wiped clean of mucus, and two drops of a silver preparation which the doctor or nurse will provide should be put into each of the baby's eyes, the lids being gently opened so that the medicine will get inside the eye. (Nitrate of silver in 1 per cent solution is put up in ampules for this purpose.) This care is necessary in all cases because a baby's eyes may become infected during the passage through the birth canal, and this infection sometimes leads to an eye disease of the newborn, called ophthalmia neonatorum, which may cause blindness. The treatment is simple and perfectly harmless and is certain to prevent the infection from developing. If, however, the treatment is not given and symptoms of the disease appear (namely, redness, swelling of the lids, and a discharge from beneath them), the mother should not lose an hour in placing the baby in the hands of the best doctor she can find. The eyes may be saved by a few hours' care, but treatment to be efficient must be begun at once; neglect may doom the baby to lifelong blindness or at best to imperfect vision. It is the law in all the States except one that this condition must be reported to the health authorities.

In bathing the eyes always use a different piece of cotton or gauze for each eye, and in case of any infection use the greatest care not to infect one eye from the other. The germs may be carried by the fingers, the towels, the cotton, or any other article that has touched the infected eye.

BATHING THE BABY

The newborn baby's skin is covered with a cheeselike substance, which is the more easily removed if it is first oiled with olive oil, liquid petrolatum, or petroleum jelly. The baby may then be wrapped warmly and put in a safe place until the mother has been attended to, after which the baby may be bathed. The water should be of a temperature that feels comfortable to the bare elbow of the nurse. After the skin is thoroughly but very gently washed with Castile soap (care should be taken not to get soap into the eyes) it should be patted dry with warm and very soft old towels. A square of sterile gauze, with a hole for the cord, is placed over the navel. This square is folded back to cover the cut end of the cord, or a second pad is placed over the cut end. The dressing is held in place with the flannel binder already prepared. Unless this dressing becomes wet or soiled it is not necessary to change it for a few days. The stump of the cord will usually shrivel and fall off within a week. After this happens the navel will be dressed in the same manner until it is entirely healed.

THE BABY'S STOOLS

The first discharges from a newborn baby's bowels are known as meconium. They are very dark green, thick and sticky, with little or no odor. These soon change to the normal yellow stools of the healthy baby after he begins to be fed. If any blood is seen in the stool of a newborn baby, the fact should be reported to the doctor immediately.

LYING-IN PERIOD

The time just after childbirth, when maternal nursing begins and the organs connected with childbirth return to the condition they were in before pregnancy, is called the lying-in period. The change in the uterus, called the involution, is the most important. The uterus dwindles in weight from about 2 pounds to about 2 ounces and sinks down to its original position in the pelvic cavity. The length of time required for these changes to take place is shorter with nursing than with nonnursing mothers, but complete involution commonly takes five or six weeks. If lacerations (tears) or other accidents have occurred during childbirth, involution may take longer.

It is plain, then, that the mother, no matter how well she may feel, needs a certain time of rest before she is fully able to take up her ordinary occupations and pleasures, which, if she goes back to them too early, may slow up or stop the natural restorative processes. Most women are allowed to sit up in a chair for an hour on the tenth day. Usually they may walk about the room after two weeks, and by the end of the month they will be allowed to go up and down stairs; but in all cases it is well for the mother to refrain from full activity for six weeks. After six weeks the doctor should make a final internal (vaginal) examination to be sure that all is as it should be and will direct the proper treatment in case anything is wrong.

For some time after the baby's birth there is a discharge from the vagina. This discharge, which is called the lochia, at first is pure blood, but later becomes quite brown in color. It is likely to increase somewhat as the mother gets about, and this is an additional reason for lengthening the period of rest and quiet after childbirth.

In a small percentage of cases the monthly periods may return at once, but in the vast majority of cases menstruation is not established until a month or two after nursing has stopped. Nursing the baby does not prevent conception, even though menstruation has not begun again.

NURSING THE BABY

It is the first duty of every mother to nurse her baby. Every doctor, nurse, or other attendant should insist that the mother nurse her baby and should do everything possible to start the secretion of milk, to promote it, or even to bring it back if for any reason it has stopped. It is true that not all mothers are able to nurse their babies, even when they would gladly do so, but the cases in which maternal nursing is impossible, at least for a few weeks, are very uncommon. There are only a few good reasons for not nursing an infant under 6 months old. Chief among them are tuberculosis in the mother and the beginning of another pregnancy.

ADVANTAGES OF BREAST FEEDING OVER ARTIFICIAL FEEDING

Mother's milk gives the baby the greatest help in the complicated and difficult task of growing, and it also makes the baby more resistant to the various sicknesses to which he may be exposed. Satisfactory nursing greatly increases his chances for growing up. Besides, it is easier to nurse the baby than to feed him otherwise. To make bottle feeding safe requires scrupulous and constant care. To secure a supply of pure milk, to keep it at the proper temperature, to have it properly prepared for the baby's use, to change the composition of the milk in accordance with the baby's changing needs, to keep all the utensils used in the care and preparation of the baby's feedings absolutely clean, to have the bottles and nipples scrubbed and sterilized, call for constant care and attention even when the baby is thriving. But when, as is often the case, the baby does not thrive, the difficulties of artificial feeding are greatly multiplied. Too often artificially-fed babies pass their first 6 or 12 months in a series of unfortunate feeding experiments, with the result that the growth of the organs, the functions, and the general development are retarded.

COLOSTRUM

At the birth of the baby there is, in by far the majority of cases, no milk in the mother's breasts. The secretion that is in the breasts at that time is called colostrum. The mother's milk does not usually come for two or three days, sometimes longer, after the baby is born. The colostrum has a laxative effect on the baby and for that reason is valuable during the first days of his life. After the mother has

had a good rest for 6 to 12 hours after the delivery, the baby should be put to the breast for 2 or 3 minutes. By this early nursing the breasts are stimulated to secrete milk, and the baby is trained early to nurse. If before the first nursing the baby becomes restless and cries a great deal, he may be given a few teaspoonfuls of warm boiled water from a bottle. It is not necessary that the water be sweetened or contain any medicine, although many physicians use a 5 per cent solution of milk sugar until the milk comes in.

POSITION FOR NURSING

The position that the mother assumes for nursing her baby varies more or less with the advice of the physician and nurse. A satisfactory position is for the mother to turn well onto the side on which she is to nurse, with the arm on that side raised up above her head. The baby, lying on the bed at her side, is able to get hold of the nipple satisfactorily and the mother is not in a cramped position.

FEEDING SCHEDULE

The time for nursing varies considerably in different parts of the country, but the majority of physicians now have the mothers nurse not oftener than once in three hours, and many put the baby at once on 4-hour feedings. The routine in the establishment of nursing varies considerably, depending many times upon how much milk there is in the breasts. As has already been said, the first nursing takes place after the mother has had a good rest. Some doctors increase the daily number of feedings gradually, so that the regular routine is established by the third or the fourth day of life. Others put the baby on the 4-hour or the 3-hour schedule immediately after the first nursing. It is important that the nursings be by the clock as soon as the regular routine can be established in order to start the baby with good habits.

CARE OF THE BREASTS

Before the baby nurses the first time the breasts should be thoroughly but gently washed. If the nipples have been carefully attended to in the last two months of the pregnancy, there will be no dried secretion on them. If by chance the nipples have not been properly attended to and there is dried secretion on them, care must be taken in removing it. The nipples first should be covered with a simple cold-cream ointment in order to soften this secretion. Under no circumstances should it be picked off, for, if it is, damage may be done to the nipples, and this may allow infection of the breasts to occur.

After the milk comes in, there may be an excessive supply for a few days. In the majority of cases there is no need of doing anything to the breasts with the first engorgement (fullness). Occasionally the physician in charge may suggest the use of a breast pump or of massage or the use of warm oil to relieve the tension in the breasts, but none of these should be used unless the physician advises it. If the engorgement is very painful, the comfort of the patient may be increased materially if ice bags are put to the breasts. A supporting bandage may greatly help large pendulous breasts, but it must be put on properly and must in no way constrict them. Massage must not be used on the breasts unless it is specifically ordered by the physician in charge. Manipulation of the breasts at the first engorgement does more harm than the good that may come in a few cases. A breast pump must not be used unless it is ordered by a physician; and if it is used, it must first be boiled and then cooled.

In the early weeks of nursing the breasts are extremely liable to injury, and the nipples especially are very apt to become cracked. If this occurs, infection may follow. The three requirements for the protection of the breasts are (1) absolute cleanliness, including washing with boiled water before and after each nursing; (2) avoidance of the slightest injury; and (3) protection of the nipples and, in the beginning, of the breasts themselves with clean linen between nursings. If the nipples crack, the baby may have to be taken off the breast entirely for a few nursings, or a nipple shield may have to be used. If the nipple shield is used, it should be boiled before each nursing. Advice on the use of the shield should be sought from the doctor.

THE BABY'S PROGRESS

Whether the baby is doing satisfactorily may be found by weighing him every two or three days. A nursing baby should gain at least 4 or 5 ounces a week. An ounce a day is a very satisfactory gain, and many babies gain much more. After the nursing is well established there should be a steady gain in the baby's weight.

If the baby cries before the feeding is due or immediately after the feeding, it may be because he is not getting enough milk, and that can readily be determined by weighing him with all his clothes on before and after nursing and noting the gain. It is not sufficient to do this once in the day. In order to find out whether there is a sufficient amount of milk, he should be weighed before and after every feeding in one 24-hour period and the amount of milk obtained noted. Even if the baby is getting only 1 ounce at a feeding—obviously not enough—this is not usually a sufficient reason for

weaning him. The breast milk must be supplemented with modified cow's milk. The thing to do is to obtain the advice of some good doctor who understands infant feeding. Four or five ounces of mother's milk is distinctly worth while for the baby, especially if this can be kept up for the first three months of his life. The attempt to nurse the baby will stimulate the flow of milk, and then, if the breasts are completely emptied at each nursing¹, the milk oftentimes will increase, especially if the mother's diet and her rest periods and general health are carefully looked after.

Another bulletin of the Children's Bureau, Infant Care, gives directions for the care of the baby to the end of the first year.

¹ If the baby does not empty the breasts, the milk should be expressed by hand or by means of a breast pump. See footnote 1, p. 55.

HYGIENE OF THE NURSING MOTHER

The diet for a nursing mother under ordinary circumstances will be the same as that prescribed during pregnancy—that is, it must be nutritious, laxative, and appetizing. The old idea that acid fruits and vegetables give the baby colic is not true, since these acids are changed in the process of the mother's digestion. However, if they or any other food or drink disturbs the mother's digestion, this may have an unfavorable effect upon the milk. If a woman eats slowly, chews her food thoroughly, and, above all, has sufficient rest and refrains from worry, there will be no reason to suppose that the maternal milk will not agree with the baby. Constipation should be guarded against as carefully during the period of lactation as during pregnancy.

A DAY'S FOOD PLAN FOR THE NURSING MOTHER

A quart of milk, a leafy vegetable, a citrous fruit (orange or half grapefruit), and an egg are essential in the nursing mother's daily diet. The following plan for the whole day's food may be helpful:

Breakfast

Fruit: Half grapefruit, whole orange, or whole banana.

Cereal (well cooked): Oatmeal, farina, or corn meal with whole milk and sugar.

Bread and butter: Two slices of bread, with two pats of butter.

Milk: One cup, or one cup of cocoa made with whole milk.

An egg, or bacon and egg, may be added to this meal. (The egg should be boiled, coddled, or poached.) One cup of coffee may be taken if desired.

10 a. m. luncheon

Milk: One glass of whole milk (if this does not interfere with the appetite for dinner).

Dinner

Meat, fish, or egg.

Salad: Lettuce, romaine, endive, cress, raw cabbage, tomato, celery and nut, fruit, with mayonnaise or French dressing.

Vegetables: Baked potato with butter, tomatoes, carrots, peas, or string beans; properly cooked cabbage, spinach, or other greens, creamed.

Bread and butter: Two slices of bread with one pat of butter.

Dessert: Custard, gelatin, canned or raw fruit, milk pudding.

Milk: One glass of whole milk.

Supper

Soup or other hot dish (made with whole milk):
Creamed pea, tomato, or other vegetable soup, or a scalloped vegetable, or macaroni and tomatoes, or rice and cheese.

Bread and butter: Bran or graham muffins or toasted raisin bread with two pats of butter.

Dessert: Stewed fruit and cake or baked apple with top milk or cream.

Milk: One glass of whole milk.

One cup of tea may be taken in addition to the milk.

A glass of milk may be taken at 10 p. m.

Every effort should be made to get fresh vegetables, as no other food can adequately replace them in the diet of the nursing mother. Canned tomatoes may be used frequently, and canned spinach occasionally. When fresh fruit is too expensive or out of season, dried or canned fruit may be used. If it is impossible to obtain fresh cow's milk, dried or evaporated milk should be used.

Cod-liver oil is excellent to take under the doctor's direction during the period of lactation, as it is during pregnancy. (See p. 11.)

HEALTHFUL LIVING ESPECIALLY IMPORTANT FOR NURSING MOTHERS

It is necessary to emphasize the importance of a quiet state of mind for all nursing mothers. There is no one thing which more certainly and completely interferes with the secretion of the milk than an overwrought, nervous condition. Moreover, an overworked mother can not be expected to supply breast milk satisfactory in either quality or quantity. The mother should have pleasant exercise, out-of-door life, pleasure, cheerful society, and should be surrounded as far as possible with things that interest her. She should have at least eight hours of sleep at night and an hour's rest during the day. The busy mother may add to her rest period by lying down while she nurses the baby. Plenty of fresh air and sunshine are always desirable. The amount and kind of exercise the mother should take depend upon her habits. Many mothers find a walk beneficial. A good rule is to exercise only to the point of a sense of pleasant stimulation. The busy housewife may get sufficient exercise in her daily activities. She should take some time out of doors, however, in the sun, preferably in the middle of the day in winter and before 12 and after 3 o'clock in hot weather.

TEMPORARY DECREASE IN MILK SUPPLY NO REASON FOR WEANING

There is usually a period after the nurse has gone and the mother is left to herself when the weariness resulting from the fact that her strength has not fully returned, broken sleep, and the worry consequent upon taking care of the baby alone causes the milk to diminish in quantity. This usually means that the mother is overdoing; she has not gained the strength to take care of her household and at the same time produce milk for the baby. It is at this time that many a mother concludes that the baby is starving and is very apt to become discouraged and give up nursing as hopeless. This is a great mistake. It is usually true that the strain of this period is relieved, day by day, as mother and baby gradually become adjusted; her strength returns; slowly but certainly things will grow more comfortable, and with this will come more milk. So that if the mother will only strive to carry herself and the baby past this time she will in all likelihood be able to nurse the baby quite successfully. At least every possible means to this end should be tried before weaning is resorted to.

The return of the menstrual periods is not a sufficient reason for weaning; but a pregnancy demands it, as the mother's strength will hardly be sufficient for this additional strain.

PREMATURE DELIVERY AND THE CARE OF THE PREMATURE BABY

The last two months of prenatal life are very important in the growth of the baby, and every effort should be made to prevent premature birth. Delivery before the proper time may be the result of some of the factors that lead to miscarriage. (See p. 32.) If the physician thinks that labor is about to take place before the proper time, he will probably send the mother to a hospital.

In spite of every effort and for some causes that are unavoidable, a certain number of deliveries occur prematurely. A premature baby is not so well developed at birth as a baby born at full term. The earlier the baby is born, the more difficult it is to keep him alive. A baby born only two or three weeks before the expected date may be quite strong and little different from a full-term baby. A baby born seven or eight or more weeks early may be very small and difficult to save, and occasionally a baby born at full term is exceptionally small and feeble. All babies weighing less than 5 pounds at birth should be treated as if premature. Instructions for care of the premature baby are included here in case the mother has not yet obtained a book on infant care. (These instructions are quoted from the Children's Bureau publication, *Infant Care*, which may be obtained free on application to the bureau at Washington, D. C.)

Many babies weighing only 2 or 3 pounds at birth can be saved if the proper care is given them. Premature babies born at home are often best cared for in their home surroundings unless a hospital suitably equipped for the care of these small infants is available. Such a hospital will have special rooms for these babies and will have doctors and nurses on the staff who are trained to care for them and who will be able to feed them properly. Great care should be taken to keep the baby warm while he is being carried to the hospital, as chilling at this time decreases the chances of saving his life. He should be wrapped immediately after birth in wool flannel or cotton batting and in several soft wool blankets, and if the hospital is more than a short distance away warm-water bottles should be used to keep him warm during the trip.

Most premature babies are born unexpectedly, and it is wise for every expectant mother to have her equipment for the birth ready two months before the baby is due.

If, as is the case in many communities, a properly equipped hospital is not available, the premature baby must be cared for at home. The advice of a physician specially trained in the care of babies should be obtained at once and followed closely. If a nurse who has been trained in the care of premature babies can be engaged her experience will be a great help to the mother.

In caring for a premature baby there are three main problems which must be kept in mind constantly:

1. How can his body be kept at normal temperature?
2. How can he be protected from infections?
3. How can he best be fed?

KEEPING THE BABY AT NORMAL TEMPERATURE

The premature baby's heat-regulating power is very slight. His body temperature must be maintained for him by having the room in which he is to be born kept warm (80° F.), by preventing exposure, by using proper clothing to prevent loss of heat, and by applying external heat. All this is most important in the first hours and days of life.

CARE IMMEDIATELY AFTER BIRTH

A premature baby may die from exposure unless proper care is given him at once after birth. As soon as he is born he should be wrapped in wool flannel or cotton batting, covering his entire body except his face. This is necessary in order to keep him from losing any of his body heat. (The cord must be protected with a sterile dressing.) He should be put at once into a warm bed which has been prepared for him (see p. 53 for homemade heated bed) in a warm room. His temperature should be taken by rectum soon after birth, and his skin should not be oiled until his temperature is normal (98.6°–99.6° F.), and then only if his general condition is good and the room temperature is not lower than 80° F. He may then be cleaned with warm oil, one part of his body at a time being uncovered. It is much more important to keep him warm than to give him a bath. The complete oil bath need not be given for several hours or even a day or two after birth.

GENERAL CARE

A premature baby should be exposed and handled as little as possible—only when it is necessary to oil him, feed him, give him drinking water, or change his diaper. He may be turned over as often as every hour or two, but should not be picked up and handled unnecessarily.

The room in which the premature baby is kept should be ventilated by means of a narrow cloth screen (2 inches or more, according to the climate) at the top of one window, and a temperature of 75° to 80° F. should be maintained steadily, day and night. When the temperature in a room is as high as this, it is apt to be very dry. If a window is kept open, even a small amount of outdoor air coming in will bring with it some moisture. More moisture can be obtained by hanging wet sheets in the room or by keeping a kettle of water boiling on a small stove at a safe distance from the baby. The temperature inside the crib should be between 80° and 90° F. A thermometer should be kept in the crib with the baby so that the temperature in the bed can be known at any time. The baby's body temperature should be taken by rectum every four hours and recorded on a chart. It should be kept between 98.6° and 99.6° F.

CLOTHING

The first clothing that a premature baby wears is usually the wool flannel or cotton batting in which he is wrapped at birth and soft wool blankets. The clothes that have been prepared for him are as a rule much too large, and the mother or nurse must prepare substitutes at once which can be put on and taken off with the least possible handling of the baby. The clothes must fit the baby snugly to provide the necessary warmth but must not be tight. For a week or two after the baby's birth it may be best to continue the use of the cotton batting or wool flannel wrapped closely about the baby's body and to use small squares of cotton batting as diapers. Soon after that, however, small shirts and bands of wool flannel or knitted wool material and small diapers may be used. A few of the regular sized diapers can be cut down to fit the tiny baby. If the diapers can not be changed without considerable handling of the baby, it is better to continue to use the cotton-batting squares, which can be removed easily.

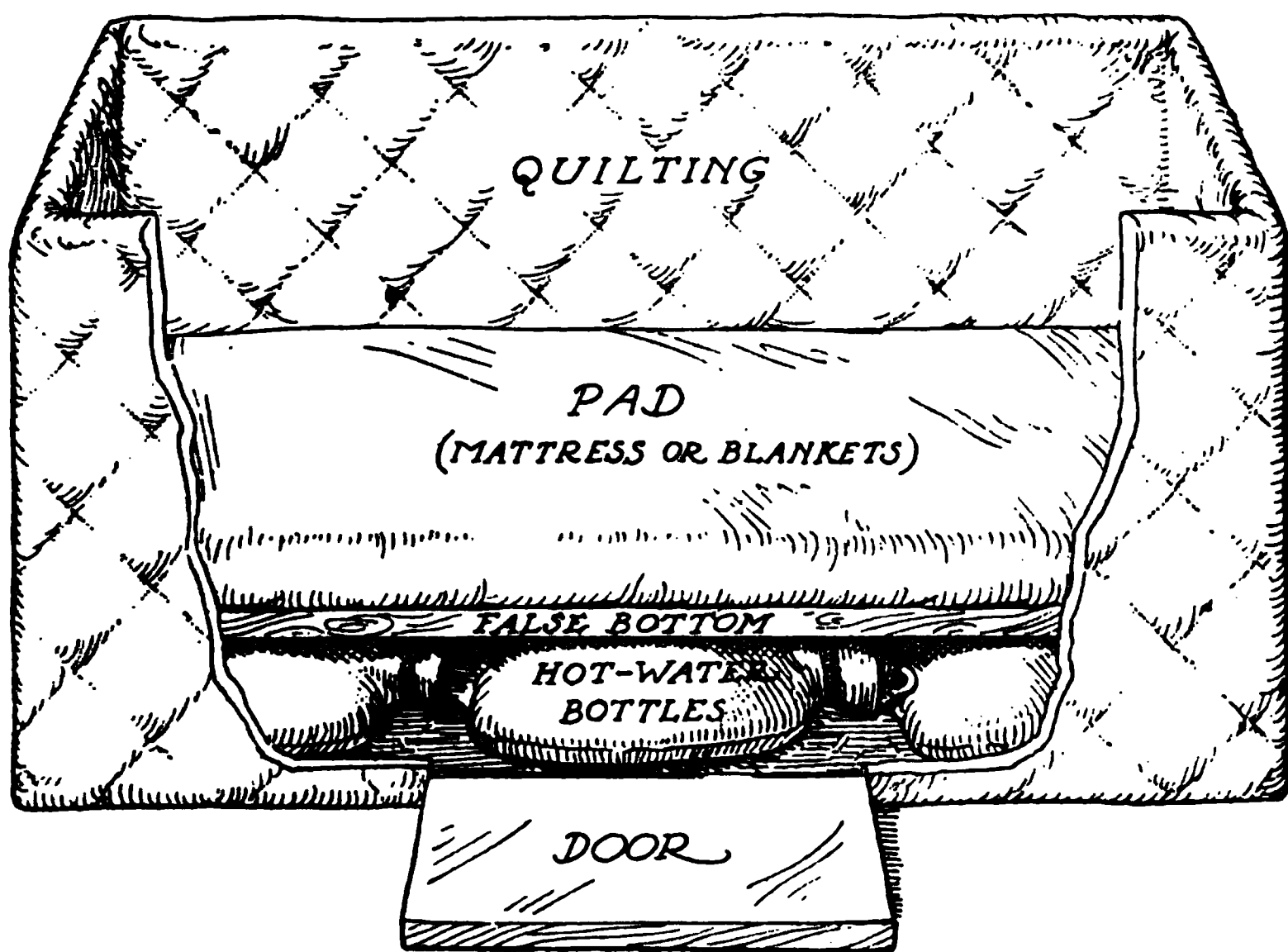
A sleeveless padded jacket may be used as a wrap. The jacket may be made of two squares of cheesecloth or of some very thin cotton material (18 inches square), with a thick layer of cotton batting stitched between, having a piece of the padded material arranged as a hood, and should be long enough to cover the feet well and wide enough to lap over and be pinned in front. It may be opened at the bottom for changing the baby's diaper. When soiled, such a jacket may be burned and a new one substituted. A small square of wool flannel or soft old blanketing may be used as a wrap instead of the cotton-padded jacket; but, though it is warmer, it is less convenient for changing the diaper without disturbing the baby.

A small-sized sleeping bag made of a double thickness of flannel or very light-weight soft wool material may be used.

None of the baby's wraps should be so tight that his movements are hampered.

HOMEMADE HEATED BED

It sometimes is necessary to prepare an emergency heated bed during delivery of a premature baby. Such a bed may be a small clothes basket or wooden box, prepared as follows: Place a pillow or several layers of folded blanket in the bottom and cover this with a piece of thin rubber sheeting. Spread a cotton sheet or an old



Bed for premature baby

blanket over the rubber sheeting and provide small, soft wool blankets with which to wrap and cover the baby. Three warm-water bottles should be filled with water at 115° F., placed in the bed before the baby is born, and kept in the bed to warm it and the blankets. (Warm bricks may be used instead.) The bed should not be allowed to get cold before the baby is put into it. After the baby is wrapped in warm blankets and put into the bed, the temperature inside the bed must be kept at 80° to 90° F., but no higher. The warm-water bottles should be refilled (at different times) with water at 110° to 115° F. and kept in the bed, but outside the baby's wraps. If warm bricks are used, they must be wrapped up and placed outside the baby's wraps. Care must be taken not to have them too hot. Such a bed will serve at first until a better one can be arranged.

A better bed can be arranged by using a small clothes basket or, still better, a box well padded inside and outside by quilting, into which is fitted a removable platform about 4 inches above the padded floor of the basket. A thin, flat hair pillow or several layers of wool blanketing should be used as a mattress to cover the platform. Beneath the platform, on the floor of the basket, three warm-water bottles are placed, which must be refilled whenever necessary to keep the temperature in the bed between 80° and 90° F. It is best to refill one bottle at a time, so as not to cool the bed too much. An opening should be cut in the side of the basket below the platform so that the warm-water bottles can be removed for refilling without disturbing the baby. (See illustration, p. 53.) The bottles beneath the platform should be at 115° to 125° F. If warm-water bottles are placed beside the baby in the bed, they should never be warmer than 115° F.

If the baby's bed is too hot, his temperature will rise above normal.

BATHING

With very small and weak babies it is frequently advisable not to give a bath for two or three days. It may, however, be necessary for the doctor or nurse to use the warm bath to stimulate the baby when he does not breathe well. If the complete daily bath can not be undertaken without danger of chilling the baby, it should be dispensed with or a partial bath may be given daily—washing the face, buttocks, and genitals only—without removing the baby from the heated bed and without exposing the rest of the body.

The baths should consist of a rapid sponging with oil or with water at 105° F. in a room 75° to 80° F., one part of the body only being exposed at a time to prevent chilling.

PROTECTING THE BABY FROM INFECTIONS

Premature babies have very little resistance to disease. They are particularly subject to infections, especially colds. A cold is serious in a premature baby because it is very likely to develop into pneumonia, which may prove fatal. Every person who cares for a premature baby or comes in contact with him in any way must be careful to wash the hands before touching the baby lest some infection be carried to him. No one who has even a slight cold or other infectious illness should be allowed to care for a premature baby. No visitor should ever be permitted in the room where a premature baby is kept. These rules can not be kept too strictly. Colds, pneumonia, and ear infections are common causes of death in premature babies.

FEEDING THE BABY

HUMAN MILK

The feeding of a premature baby is a most serious problem. Mother's milk is the best food for him. Until the mother's milk is established, every effort should be made to get at least a few ounces of milk daily from some other mother nursing her own child or from a breast-milk agency, or to obtain a regular wet nurse. Any milk except that of the premature baby's own mother should be boiled for one minute.

The premature baby may be too weak to nurse or to draw milk from a bottle, and in that case the mother's milk should be expressed by hand or by a breast pump¹ and fed to the baby slowly by means of a medicine dropper or stomach tube. Feeding with a stomach tube (so-called "catheter feeding.") should be undertaken only by a trained person. If a medicine dropper is used, it is well to slip a short piece of soft-rubber tubing over the end to prevent injury to the baby's mouth. Occasionally a strong premature baby may be able to nurse or to take breast milk from a bottle.

As it may be some weeks before the baby is able to draw even small amounts of milk from the breast, it will be necessary for the mother to empty her breasts at regular intervals, not only to obtain milk for the baby during the early weeks of life, but to keep up the milk flow until the baby is strong enough to nurse.

If breast milk can not be obtained, artificial feeding will become necessary. The doctor will order the formula.

Care should be taken that the baby is not overtired during feeding.

NUMBER AND AMOUNT OF FEEDINGS

It is best to withhold food for 12 hours the first day of the baby's life. During the second 12 hours the baby may receive three feedings. Expression of milk from the mother's breasts should be begun at the

¹ The breasts may be emptied by hand, by an electric breast pump, or by a hydraulic breast pump. Breast pumps may be rented or purchased through the physician. The ordinary suction breast pump is of little value. Emptying the breast by hand should be done as follows: Scrub hands and nails with soap and warm water for one full minute, using a brush. Dry the hands on a clean towel. Wash the nipple with cotton dipped in boiled water. Have a sterilized glass and bottle ready to receive the milk. If the glass you are using has no lip, you should also have a sterilized funnel ready. Place the balls of the thumb and forefinger on opposite sides of the breast $1\frac{1}{2}$ inches from the nipple. This is usually at the edge of the pigmented area. Press deeply and firmly into the breast until the resistance of the ribs is felt. Then bring the thumb and fingers tightly together well behind the base of the nipple. When the fingers and thumb are pressed deeply into the breast, keep them there and repeat the "together" motion 60 to 100 times per minute. Speed is important and is attained after some practice. The fingers should not slip forward on the breast lest the skin be irritated. It is not necessary to touch the nipple. If the stripping of the breasts is done in this way, it will cause no discomfort. If the milk expressed is not to be used at once, it should be kept on ice in a sterilized stoppered bottle.

end of 12 hours, and the colostrum—and the milk when it comes—should be given to the baby. From then on he should be fed regularly day and night. Small babies fed with a medicine dropper should receive their food at 2-hour intervals during the day and 3-hour intervals during the night (10 feedings in 24 hours). Larger babies, whether fed with a dropper or from a bottle, may be fed from the start at 3 hour or even 4-hour intervals.

The baby needs daily a total amount of fluid (milk and water) equal to about one-fifth to one-sixth of his body weight in pounds. For instance, if the baby weighs 3 pounds, he will need daily one-fifth of 3 pounds, or three-fifths of a pound of fluid. As 1 pound is equal to 16 ounces, three-fifths of a pound will be equal to about $9\frac{1}{2}$ ounces. The 3-pound baby's full requirement of fluid therefore during 24 hours will be $9\frac{1}{2}$ ounces.

Such quantities, although needed, can not be given to the premature baby during the first days of life. The amount given daily will at first be small and the increases gradual. In fact, it is fortunate if the baby can take one-eighth of his body weight in total fluid (2 ounces for each pound of body weight) by the fourth day.

The quantity of milk given in 24 hours at first will be half an ounce to an ounce of milk for each pound of body weight. This will be divided into 10 feedings; each feeding will therefore be very small—1 to 3 teaspoonfuls of breast milk. The total amount of milk given in 24 hours may be increased daily by one-eighth to one-fourth ounce for each pound of body weight, until usually by the tenth day the total amount of milk taken in 24 hours will be 2 to 3 ounces per pound of body weight. The rapidity with which the amounts can be increased will vary with the size and development of the individual baby.

DRINKING WATER

During the period when the baby is receiving very small feedings of breast milk, special care must be taken to give him small quantities (1 to 4 teaspoonfuls) of boiled water between feedings. He will need this to bring his total intake of fluid up to even the lowest requirement—2 ounces for each pound of body weight. As he takes more milk he will require less water, but it is well to offer water to him between feedings even when he is strong enough to take an adequate amount of fluid at his feedings.

THE BABY'S WEIGHT

Although occasionally premature babies will hold their birth weight, most of them will lose weight and should not be expected to regain their birth weight until the second or, what is more likely,

the end of the third week. In very small premature babies an average daily gain of one-third to one-half ounce, with a doubling of birth weight in 75 to 100 days, may be considered satisfactory.

ADDITIONAL FOODS

Premature babies are likely to develop rickets, and therefore it is important that treatment in the form of pure cod-liver oil, tested for the antirachitic vitamin D, should be begun at the end of the first week of life. Begin with one-fourth teaspoonful of cod-liver oil twice a day and after two or three weeks increase this amount to one-half teaspoonful twice a day. At the end of six weeks this amount may be again increased to 1 teaspoonful twice a day, and in the third month to 1½ teaspoonfuls twice a day.

Orange juice—one-half teaspoonful in water once a day—should be begun when the baby is 2 weeks old and the amount increased gradually so that at 2 months the baby receives one-half tablespoonful twice a day and at 3 months 1 tablespoonful.

Other foods should be added to the baby's diet as he grows older, as they are to the diet of the normal baby.

SUN BATHS

Sun baths can not be given to small premature babies until they are strong enough to have part of their clothing removed and lie in the sun without chilling. In summer, when the sun is very warm, premature babies may be given sun baths at an earlier age than in winter. Because sun baths can not be given to premature babies when they are very young, special effort must be made to see that the full amount of cod-liver oil, tested for vitamin D, is given with great regularity. In hospitals artificial sun baths of ultra-violet light may be advised by the doctor.

THE BABY'S LATER DEVELOPMENT

As he grows older a premature baby should become more and more like a small edition of a healthy full-term baby. Though small, he should have good color in his cheeks, his muscles should be firm, and he should gradually become more and more active and alert. He may be slower in learning to do some things, like holding up his head or sitting up; but if he gets the right kind of food and plenty of sunlight, he will usually catch up to the full-term baby of the same age by the time he is 2 or 3 years old.

SELECTED BOOKS OF INTEREST TO MOTHERS ¹

- Baby's Daily Time Cards. U. S. Children's Bureau Chart No. 14. (Revised February, 1930.)
- The Baby in the House of Health. American Child Health Association, New York, 1926. 48 pp. 10 cents.
- Breast Feeding. U. S. Children's Bureau Folder No. 8.
- Child Management, by D. A. Thom, M. D. U. S. Children's Bureau Publication No. 143. Washington, 1928. 47 pp. (New edition in preparation.)
- A Doctor's Letters to Expectant Parents, by Frank Howard Richardson, M. D. Children, the Parents' Magazine, and W. W. Norton & Co., New York, 1929. 118 pp. \$1.75.
- The Expectant Mother; care of her health, by Robert L. De Normandie, M. D. (Edited by the National Health Council.) Funk & Wagnalls Co., New York, 1924. 57 pp. 30 cents.
- The Expectant Mother in the House of Health. American Child Health Association, New York, 1926. 23 pp. 10 cents.
- Everyday Problems of the Everyday Child, by D. A. Thom, M. D. D. Appleton & Co., New York, 1927. 349 pp. \$2.50.
- Feeding the Family, by Mary Swartz Rose. Macmillan Co., New York, 1929. 459 pp. \$2.40.
- Getting Ready to Be a Mother, by Carolyn Conant Van Blarcom, R. N. Macmillan Co., New York, 1922. 237 pp. \$1.50.
- Infant Care. U. S. Children's Bureau Publication No. 8. Washington, 1929. 127 pp.
- The Infant and Young Child; its care and feeding from birth until school age, by John Lovett Morse, A. M., M. D., E. T. Wyman, M. D., and L. W. Hill, M. D. (Revised.) W. B. Saunders Co., Philadelphia, 1929. 299 pp. \$2.
- Keeping the Well Baby Well. U. S. Children's Bureau Folder No. 9. (Revised 1930.)
- A Practical Psychology of Babyhood, by Jessie Chase Fenton. Houghton Mifflin Co., Boston, 1925. 348 pp. \$3.50.
- The Prospective Mother, by J. Morris Slemons. (Revised.) D. Appleton & Co., New York, 1921. 343 pp. \$2.
- Simplifying Motherhood, by Frank Howard Richardson, M. D. G. P. Putnam's Sons, New York, 1925. 263 pp. \$1.75.
- Sunlight for Babies. U. S. Children's Bureau Folder No. 5.
- What Builds Babies. U. S. Children's Bureau Folder No. 4.
- Why Drink Milk? U. S. Children's Bureau Folder No. 3.
- Why Sleep? U. S. Children's Bureau Folder No. 11.
- Your Child's Teeth. U. S. Children's Bureau Folder No. 12.

¹ Single copies of Children's Bureau publications may be obtained free by writing to the bureau at Washington, D. C.

GLOSSARY

Abdomen.—The belly; the part of the body between the chest and the pelvis, containing the stomach, bowels, etc.

Abnormal.—Irregular; not according to the usual standard or condition.

Abortion.—A miscarriage.

Afterbirth.—The mass of tissue (placenta and membranes) expelled from the uterus after the baby's birth.

Antirachitic.—Preventing rickets from developing, or curing the disease if it is present.

Anus.—The outlet of the bowels.

Assimilation.—The process by which the body absorbs or makes use of nourishment.

Birth canal.—The passage through which the child is born.

Blood pressure.—The pressure of the blood on the walls of the blood vessels. It is of special importance that the doctor take at each visit the blood pressure of the expectant mother because a rising blood pressure is one of the symptoms of toxemia of pregnancy.

Calcium.—Lime; a mineral required by the body, particularly for the teeth and bones.

Childbed fever.—Fever of the mother resulting from blood poisoning at or near the time of childbirth; puerperal septicemia.

Circulation.—Movement in a regular course, as the circulation of the blood in the vessels of the body.

Colostrum.—The first fluid from the breasts of the mother after delivery of the child but before the milk comes.

Conception.—The fertilization by the father of the egg in the mother which starts the growth of the fetus in the mother's body.

Confinement.—The time that it is necessary for a mother to remain in bed during and after the birth of her baby.

Constipation.—The passing of very hard material from the bowels, or the passing of a very small amount, or failure to empty the bowels daily.

Constitutional disease.—A disease in which the whole body or a large part of it is affected.

Criminal abortion.—An abortion or miscarriage that is artificially brought about and is not necessary to save the life or protect the health of the mother.

Delivery.—The birth of the baby.

Dental arch.—The arch of the jaw that contains the teeth and is covered by the gums.

Digestive organs.—The principal digestive organs are the mouth, stomach, and bowels.

Douche.—A stream of water directed upon or into a part of the body.

Enema.—The insertion of a medicine or liquid into the rectum.

Fetus.—The unborn child in the uterus.

Goiter.—Enlargement of the thyroid gland, causing a swelling in the front part of the neck.

Hygiene.—A system of health rules or principles that will prevent disease and keep the body in good condition.

Infection.—The entrance into the body of germs that cause disease.

Intestines.—The long tube extending from the stomach to the anus; the bowels.

Involution.—The return of the uterus to its natural size after the baby is born.

Kidneys.—The two organs in the abdominal cavity that secrete the urine.

Lactation.—The formation of milk in the mother's breasts after the birth of the baby; the nursing period.

Laxative.—A food that keeps the bowels open; a medicine that causes the bowels to move.

Massage.—Treating the body by systematic stroking, rubbing, or kneading.

Menstrual period (menstruation).—The monthly flow in women.

Miscarriage.—Expulsion of the fetus before it can live outside the mother's body—that is, before the seventh month of pregnancy; abortion. *See* Self-induced miscarriage; Criminal abortion.

Nausea.—Sickness at the stomach.

Navel.—The place in the abdomen where at birth the cord was attached that connected the baby with the mother.

Obstetrical.—Having to do with the care and treatment of women during pregnancy and childbirth.

Pelvis.—The bony cavity formed chiefly by the hip bones and containing the uterus, vagina, bladder, and rectum.

Placenta.—The organ within the uterus of the pregnant woman through which nourishment passes from her to the fetus. It is attached on one side to the uterus of the mother; a cord on the other side connects it with the fetus.

Premature.—Happening before the usual time, which in reference to the length of pregnancy is nine months; as, premature birth, premature labor.

Prenatal.—Before birth; refers to the period of pregnancy.

Prenatal center or clinic.—A place to which expectant mothers can go for advice free or for a small sum; usually connected with health departments or hospitals.

Puerperal septicemia.—A disease caused by blood poisoning at or near the time of childbirth; sometimes called childbed fever.

Rectum.—End of the lower intestine leading to the opening or anus.

Rickets.—A disease of children in which the bones become soft because of lack of calcium. It can be prevented and cured by sunlight and cod-liver oil.

Roughage.—Any part of food that passes through the bowels without being digested; it thus helps to make the bowels move and to prevent constipation.

Self-induced miscarriage.—A miscarriage or abortion that is brought about by the mother.

Spontaneous miscarriage.—A miscarriage or abortion that occurs naturally, without artificial interference.

Sterilize.—To make free from all germs.

Stool.—The discharge from the bowels.

Syphilis.—A certain constitutional disease that is communicable through contact—by sexual intercourse or otherwise—with a person who has the disease or with his towels, drinking glass, or other personal belongings. The baby in the uterus will become infected with the disease from a mother who has it if the mother does not receive adequate treatment during pregnancy. For this reason a blood test (Wassermann) is necessary for all pregnant women.

Thyroid.—A large gland in the neck that is of great importance to the proper working of the body machinery. *See* Goiter.

Tissue.—A collection of cells forming parts of the body, as bone tissue, brain tissue, muscle tissue.

Tonsils.—Small, soft masses lying on each side of the throat.

Ultra-violet light.—Rays of the sun or of certain kinds of artificial light that do not give heat and can not be seen but have a powerful effect on living matter; they prevent and cure rickets.

Uterus.—The organ in which the unborn baby lies; womb.

Vagina.—The passage through which the baby leaves his mother's body at birth; the lower part of the birth canal.

Vitamins.—Certain food elements that are necessary for proper nourishment and growth. Lack of vitamins in the diet produces certain diseases such as rickets.

Vioosterol.—A medicine made by treating a substance called ergosterol with ultra-violet light.

Wassermann test.—A test of the blood to find out if syphilis is present.

Womb.—Uterus.

INDEX

Abdomen:

Binders or supports for, 15, 16, 24, 30, 39.

Blood vessels of, 29.

Definition, 59.

Examination of, 3.

Labor pains in, 36.

Pain in, during pregnancy, 17, 33.

Pressure on, during delivery, 38.

Abnormal delivery, 22.

Abortion, 59. *See also* Miscarriage and Criminal abortion.

Acid fruits and vegetables, 47. *See also* Fruits and Vegetables.

Afterbirth, 35, 37, 39, 59. *See also* Placenta.

"Afterpains," 37.

Alcoholic drinks, 13.

Amniotic sac, 36, 37.

Anesthetic, 37.

Anus, 29, 59, 60.

Appetite, 12, 47. *See also* Food.

Artificial feeding:

Of baby, 21, 43.

Of premature baby, 55.

Attendant at birth, 35, 38, 39, 43.

Automobile rides, 14, 32.

Baby:

Birth of, 35-37, 38-39.

Care of newborn, 39, 40-41.

Care of premature, 50-57.

Clothing for, 23, 26-27, 36.

Feeding of, 43-49.

Supplies for, 26-28.

"Baby's sore eyes." *See* Ophthalmia neonatorum.

Back:

Labor pains in, 36.

Strain on, caused by high heels, 16.

Bag of waters, 36, 37, 38.

Baking soda, 19.

Bath:

Daily, for expectant mother, 18, 20, 32.

First, for baby, 41.

For premature baby, 51, 54.

Bands, baby's knitted, 26. *See also* Binders.

Basket bed, baby's, 26.

Bassinette, 26.

Bathing and swimming, 14.

"Bearing down," 37, 38.

Belching, 29.

Bicarbonate of soda. *See* Baking soda.

Binders, abdominal:

For use during pregnancy, 15, 16, 30.

For use after delivery, 24, 39.

Binders, baby's flannel, 26, 41. *See also* Bands.

Binders, breast. *See* Brassières.

Birth canal, 2, 18, 37, 40, 59.

Birth of baby. *See* Delivery.

Birth, probable date of, 2, 3.

Birth-registration information, II.

"Birthmarks," 21.

Bladder. *See* Urine.

Bleeding:

After delivery, 39.

From baby's navel, 39.

In pregnancy, 33, 34.

Blindness in baby, prevention of, 40.

Blocks to raise delivery bed, 23.

Blood:

From navel cord, 39.

In baby's stools, 41.

Loss of, after delivery, 39.

See also Bleeding.

Blood poisoning (puerperal septicemia), 18, 20, 33, 35.

Blood pressure, 3, 4, 31, 59.

Blood tests, 3, 32, 60, 61.

Blood vessels, 29, 30.

Bloody discharge during labor, 36. *See also* Bleeding.

Bobbin, for tying navel cord, 24, 25.

Bones:

Baby's, 6, 14, 18, 59, 60.

Mother's pelvic, 3.

Books for mothers, 58.

Boric acid, 17, 24.

Bottle feeding of baby. *See* Artificial feeding of baby.

Excretion. *See* Elimination of body wastes.

Exercise:

After childbirth, 42.

For expectant mother, 13-14, 17, 32.

For nursing mother, 48.

Expression of breast milk, 46, 55.

Eyes, baby's, care of, 40.

Eyes, expectant mother's, spots before or blurring of, 31.

Face, baby's, turning blue during birth, 38.

Face, expectant mother's, puffiness of, 31.

Father, 13, 20-21.

Fatigue:

After delivery, 39.

In expectant mother, 13, 14, 21, 32.

In nursing mother, 48, 49.

See also Rest, daily.

Fats in diet, 6, 12.

Fears, 21.

"Feeling life," 2.

Feet. *See* Shoes.

Fetus, 32, 33, 59, 60.

"Fever, childbed." *See* Puerperal septicemia.

Fish, 8-11, 47.

Food:

For baby, 43-49.

For expectant mother, 6-12, 18, 19.

For mother during labor, 36.

For nursing mother, 46, 47-48.

For premature baby, 50, 51, 55-57.

Fountain syringe in supplies for delivery, 24.

Fresh air:

For expectant mother, 13, 14, 19, 21, 32.

For nursing mother, 48.

Fried foods, 12.

Fruits, 6, 8, 11, 17, 18, 47, 48.

Gain in weight. *See* Weight.

Gardening, 13.

Garters, 16.

Gauze in supplies for delivery, 24, 25, 39, 40, 41.

Gland, thyroid, 3, 11.

Glands:

In neck of uterus, 30.

Milk. *See* Breast feeding.

Sweat, 14.

Goiter, 11, 60.

Golf, 14, 32.

Green vegetables. *See* Vegetables.

Gums, 19.

Habit training for baby, importance of early, 21, 44.

Hands, puffiness of, 31.

Head, baby's, delivery of, 38,

Health rules, 31-32.

Heart, examination of, 3.

Heartbeat of unborn baby, 2.

Heartburn, 29.

Heels for wear during pregnancy, 15, 16.

Hemorrhage. *See* Bleeding.

Hemorrhoids, 29.

Home delivery, 22-26, 38-39.

Home, harmonious, 20-21.

Horseback riding, 14, 32.

Hospital:

Costs, 22.

For expected abnormal delivery, 22.

For expected premature delivery, 50.

For premature baby, 50-51.

What to bring to, 23.

When to start for, 36.

Hot weather, sun baths in:

For nursing mother, 48.

For premature baby, 57.

Housework:

For expectant mother, 13, 14, 21, 32, 34.

For nursing mother, 48, 49.

Husband, 13, 20-21.

Hygiene:

Definition, 60.

Of pregnancy, 3, 4, 6-21.

Of the nursing mother, 47-49.

See also Breast feeding.

Hygiene, mental, 20-21, 47-48.

Ice, for helping uterus to contract, 39.

"Impressions, maternal," 21.

Indigestion. *See* Digestion.

Infant Care (U. S. Children's Bureau Bulletin No. 8), 46, 50.

Infection:

Definition, 60.

Of expectant mother through birth canal, 18.

Of baby's eyes at birth, 40.

Of mother's breasts, 44, 45.

Protecting premature baby from, 51, 54.

With syphilis, 60.

See also Puerperal septicemia.

Intercourse, sexual, during pregnancy, 20, 32, 60.

Internal examinations, 2, 3, 35, 42.

Intestines, 7, 10-11, 17, 60. *See also* Elimination of body wastes and Digestive organs.

Involution of uterus, 42, 60.

Iodine to prevent goiter, 11.

Jaw, formation of baby's, 18.

Joints, pelvic, 30.

Jolting, 32.

Journeys, 14, 32.

Kidneys, 3, 10-11, 17-18, 60. *See also* Urine.

Labor. *See* Delivery.

Labor pains, 35-37, 38.

Lacerations, 39, 42.

Lactation, 60. *See also* Breast feeding.

Laundering clothes outside hospital, 23.

Laxative:

Definition, 60.

Diet, 10-11, 17, 47.

Layette. *See* Clothes for baby.

Legs:

Burning in, 29.

Cramps in, 30.

Puffiness in, 31.

Tingling in, 29.

Veins of, 29.

Leucorrhea, 30.

Ligatures for navel cord:

Bobbin for making, 24, 25.

Tying, 38-39.

Lime in diet. *See* Calcium.

Limewater, 19.

Liquids in diet, 11, 17.

Lochia, 42.

Lungs, 3, 17.

Lying-in period, 5, 42.

Magnesia, milk of, 19.

Manual expression of breast milk, 46, 55.

Marital relations. *See* Sexual intercourse.

"Marking" the baby, 21.

Massage:

Definition, 60.

Of breasts, 45.

Of legs, 30.

Of uterus, 39.

"Maternal impressions," 21.

Maternity garments. *See* Clothes for expectant mother.

Meat, 6, 8-12, 32, 47.

Meconium, 41.

Medical examinations. *See* Examinations by doctor.

Membranes surrounding fetus, 33, 35, 37, 39, 59.

Menstruation, 1, 3, 13, 20, 33, 42, 49, 60.

Mental hygiene:

For expectant mother, 20-21.

For nursing mother, 47-49.

Menus, sample:

For expectant mother, 7-10.

For nursing mother, 47-48.

Milk, breast. *See* Breast feeding.

Milk, cow's:

Dried, 7, 48.

Evaporated, 7, 48.

For baby. *See* Artificial feeding.

For expectant mother, 6-11, 18.

For nursing mother, 47, 48.

Hot, 39.

Skimmed, 7.

Top, 10, 48.

Whole, 7, 8, 9, 10, 47, 48.

Milk puddings, 48.

Milk sugar, 44.

Milk of magnesia, 19.

Minerals in diet, 6, 7, 18.

Miscarriage, 32-33, 60. *See also* 13, 14, 20, 50.

"Morning sickness," 1, 29. *See also* Nausea.

Mother's milk. *See* Breast feeding.

Motoring, 14, 32.

Mouth hygiene, 19.

Mucus to be wiped from newborn baby's face, 40.

Naps, 14, 21. *See also* Sleep.

Nausea, 1, 12, 29, 60.

Navel, definition of, 60.

Navel cord:

Bobbin, for tying, 24, 25.

Connects fetus and placenta, 60.

Dressings for, 24-26, 41, 51.

Tying, 38-39.

Neck. *See* Goiter and Thyroid.

Nerves, overwrought, 20, 48.

Nervous system, 21.

Nervousness, 21, 48.

Neuralgic pains, 31.

Newborn baby, 39, 40-41. *See also*
Premature baby.

Nipple shields, 45.

Nipples:

Brassière loose over, 16.

Care of, during pregnancy, 20.

Dried scale on, 20, 44.

Not to be touched in expressing
milk, 55.

Protection of, in early weeks of
nursing, 45.

See also Breasts and Breast feeding.

Nipples, rubber, 43.

Nitrate of silver, 40.

Nurse:

District, 5.

Engaging, 3, 5.

Public-health, 5, 26.

Special, for premature baby, 51.

Visiting, 5.

Wet, for premature baby, 55.

Work of, 35, 36, 40, 44.

Nursing mother. *See* Breast feeding.

Obstetrical packages, 25. *See also*
Supplies and equipment for
delivery.

Oil, warm, for breasts, 45.

Oiling of newborn baby, 41, 51.

Olive oil:

For cleansing newborn baby, 26,
41.

In diet, 17.

Ophthalmia neonatorum, 40.

Orange juice for premature baby, 57.

Outdoor life, 13, 14, 18, 21, 48.

Overeating, 12, 32.

Overweight woman, 7, 10, 12.

Oxygen. *See* Fresh air.

Pads, delivery, 24, 25, 38.

Pads, sanitary, 24, 25, 39.

Pain:

After delivery, 37.

Colicky, 17.

Headache, 31.

In abdomen, 17, 33.

In breasts, 45.

In legs, 30.

In pit of stomach, 31.

Labor, 35-37, 38.

Neuralgic, 31.

See also Colic in baby.

Pelvic cavity, 42, 60.

Pelvic examination, 3.

Pelvic girdle, 30.

Pelvic joints, 30.

Pelvic organs, 2.

Pelvis:

Definition, 60.

Measurements of, 3.

Perspiration, 14.

Petrolatum, liquid, 26, 41.

Petroleum jelly, 24, 41.

Phosphorus in diet, 18.

Physical examinations. *See* Examina-
tions by doctor.

Physician. *See* Doctor.

Piles, 29.

Placenta:

Baby nourished through, 6.

Definition, 60.

Expelling of, after delivery, 35, 37,
39.

Loosening of, a cause of miscar-
riage, 33.

Pledgets, cotton, 25, 27, 39, 40.

Postnatal period, 5, 42.

Potatoes, 6-10, 47.

Powdered milk, 7, 48.

Pregnancy, previous, 3.

Pregnancy a reason for weaning, 49.

Premature baby, care of, 50-57.

Premature delivery, 14, 20, 32, 38, 50, 60.

Prenatal center or clinic, 4, 60.

Prickling in breasts, 1.

Proteins in diet, 6, 7.

Public-health nurse, 5, 26.

Puerperal septicemia (blood poisoning),
18, 20, 33, 35, 59, 60.

Puffiness of face, hands, or legs, 31.

Pump, breast, 45, 46, 55.

"Quickening," 2.**Railroad trips, 14.****Raw fruit, 8-11, 48.****Raw vegetables, 6-10.****Recreation:**

After lying-in period, 42.

For expectant mother, 21, 32.

For nursing mother, 48.

Rectal examinations, 35.**Rectum:**

Definition, 60.

Varicose veins in (piles), 29.

Rennet, 7.**Rest, daily:**

For expectant mother, 13, 14, 21, 32.

For nursing mother, 46, 47, 48.

*See also Sleep.***Rest in bed:**

During lying-in period, 5, 42, 44.

During pregnancy—

For abdominal pain, 33.

For bleeding, 33, 34.

For preventing miscarriage, 32.

For varicose veins, 29.

Rickets, 57, 59, 60, 61.**Riding:**

Automobile, 14, 32.

Horseback, 14.

Roughage in diet, 17, 60.**Rubber sheet:**

For delivery bed, 24, 36, 38.

For premature baby's bed, 53.

Rubbing. *See* Massage.**Salads, 8-10, 47.****Salt in diet, 11, 12, 32.****Salts, mineral. *See* Minerals in diet.****Sanitary pads, 24, 25, 39.****Scale on nipples, 20, 44.****Schedule for baby's feedings, 44.****Sea trips, 14, 32.****Septicemia. *See* Puerperal septicemia.****Sewing machine, running, 32.****Sexual intercourse during pregnancy, 20, 32.****Shaving of external parts, 35, 38.****Shoes, 15, 16.****"Show" of blood at the beginning of labor, 36.****"Sick pregnancy," 31.****Signs of pregnancy, 1-2.****Silver, nitrate of, 40.****Skating, 32.****Skin, 10, 17, 18.****Sleep:**

After delivery, 39.

Amount needed, 14, 21, 32.

Broken by need to urinate, 2.

For nursing mother, 48, 49.

In intervals between labor pains, 36.

Windows open during, 14.

*See also Rest.***Soda. *See* Baking soda.****Sore throat, 32.****Soups, 7, 9, 10, 11, 48.****"Sponges" of gauze, 24, 25.****Sports, 13, 14, 32.****Spots before eyes, 31.****Stages of labor, 35-37.****Starches in diet, 6, 29.****Sterile obstetrical supplies, 24-26, 35, 38.****Sterilization, 60.**

Of delivery supplies, 25-26.

Of nursing bottles and nipples, 43.

Of utensils for use in expressing breast milk, 45, 55.

Sterilized dressings, 25, 26, 35, 38, 51.**Stillbirths, 32.****Stinging in breasts, 1.****Stomach:**

Eructations from, 29.

Examination of, 3.

Pain in pit of, 31.

Upset by wrong food, 12, 29.

*See also Digestion and Nausea.***Stools, 41, 60.****Sugar in diet, 6-10, 29, 47.****Sugar in urine, 29.****Sugar, milk, 44.****Sunshine:**

For expectant mother—

As help to digestion, 12.

Cod-liver oil a substitute for, 11, 60.

For general health, 13.

For mental health, 21.

In delivery room, 23.

To build baby's teeth and bones, 13, 18.

For nursing mother, 48.

Prevention and cure of rickets by, 60, 61.

Supplies and equipment for delivery, 23-26, 50.**Supplies, baby's, 26-28.****Swabs. *See* Pledgets, cotton.****Sweat glands, 14.**

Sweeping. *See* Housework.

Swelling. *See* Puffiness of face, hands, or legs and Goiter.

Swimming, 14.

Syphilis, 32-33, 60, 61. *See also* Blood test.

Syringe, fountain, in supplies for delivery, 24.

Tea, 9, 11, 48.

Tears (lacerations), 39, 42.

Teeth, expectant mother's, 18-19.
Examination of, 3.
Injured by undernourishment, 6.
Protected by right diet, 7.

Teeth, building baby's, 6, 11, 14, 18, 59.

Temperature of premature baby, 51-54.

Tennis, 14, 32.

Tests:
Of blood, 3, 32, 60, 61.
Of urine, 4, 17-18, 29, 31.

Throat:
Burning in, 29.
Examination of, 3.
Sore, 32.
See also Tonsils.

Thyroid:
Definition, 61.
Enlargement of, 11, 60.
Examination of, 3.
Iodine for, 11.

Toast, 8-10, 29, 48.

Tobacco, 13.

Toilet tray, baby's, 27.

Tonsils:
Definition, 61.
Examination of, 3.

Toxemia, 31-32.

Training of baby from birth, 21, 44.

Traveling, 14, 32.

Tuberculosis, 43.

Ultra-violet light, 61. *See also* Sunshine.

Umbilical cord. *See* Navel cord.

Underweight woman, 7, 9-10.

Urine:
Analysis of, 4, 17-18, 29, 31.
Frequent passing of, 1, 2.

Uterus:
Contraction of, after delivery, 37, 39.
Definition, 61.
Dilatation of mouth of, in labor, 35-36.

Uterus—Continued.
Expulsion of afterbirth from, 37, 39, 59.
"Feeling life" in, 2.
Glands in, 30.
In miscarriage, 32-33.
Involution of, 42.
Massage of, 39.
Pressure of, on intestines, 17.
Pressure of, on blood vessels, 29, 30.

Vagina:
Bleeding from, during pregnancy, 34.
Definition, 61.
Discharge from, during pregnancy, 30.
Discharge from, after delivery, 38, 39, 42.
Examinations by, 2, 35, 42.
See also Birth canal.

Vaginal examinations, 2, 35, 42.

Varicose veins, 29.

Vegetables, 6-12, 17, 18, 47, 48.

Ventilation:
Of house, 32.
Of room for premature baby, 52.
See also Fresh air.

Vioosterol, 11, 61.

Visiting-nurse association, 5, 25.

Vitamins, 6, 7, 18, 57, 61.

Vomiting:
A sign of pregnancy, 1.
Relieving slight occasional, 29.
Serious or persistent, 31.

Walking, 13, 48.

Washes, mouth, 19.

Washing. *See* Housework.

Wassermann test, 32, 60, 61.

Wastes, body, elimination of, 7, 10-11, 14, 17, 18, 31, 60.

Water, drinking:
For baby, 44.
For expectant mother, 11, 17, 32.
For premature baby, 51, 56.

Waters, bag of, 36, 37, 38.

Weaning, insufficient reasons for, 45-46, 49.

Weight:
Of baby, 45.
Of expectant mother, 3, 7-12.
Of premature baby, 50, 56-57.

Wet nurse for premature baby, 55.

White sauce, 7.

Whites. *See* Leucorrhea.

Whole-grain cereals and breads, 6-9,
11, 17, 18.

Whole milk, 7, 8, 9, 10, 47, 48.

Winter. *See* Cold weather.

Womb. *See* Uterus.

Work for expectant mother:

And diet, 8-10.

And rest periods, 13, 14, 21.

Excessive, 13, 32.

Work for mother after delivery, 42.

Work for nursing mother, 48-49.

Worry, 21, 47, 49.



U. S. DEPARTMENT OF LABOR
CHILDREN'S BUREAU

JULIA C. LATHROP, Chief

HANDBOOK OF FEDERAL
STATISTICS OF CHILDREN

PART I

NUMBER OF CHILDREN IN THE UNITED STATES WITH
THEIR SEX, AGE, RACE, NATIVITY, PARENTAGE
AND GEOGRAPHIC DISTRIBUTION

Bureau Publication No. 5



WASHINGTON
GOVERNMENT PRINTING OFFICE
1913

LAW ESTABLISHING THE CHILDREN'S BUREAU.

AN ACT To establish in the Department of Commerce and Labor a bureau to be known as the Children's Bureau.

[62d Cong., 2d session. S. 252. Public, No. 116.]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established in the Department of Commerce and Labor a bureau to be known as the Children's Bureau.¹

SEC. 2. That the said bureau shall be under the direction of a chief, to be appointed by the President, by and with the advice and consent of the Senate, and who shall receive an annual compensation of five thousand dollars. The said bureau shall investigate and report to said department upon all matters pertaining to the welfare of children and child life among all classes of our people, and shall especially investigate the questions of infant mortality, the birth rate, orphanage, juvenile courts, desertion, dangerous occupations, accidents and diseases of children, employment, legislation affecting children in the several States and Territories. But no official, or agent, or representative of said bureau shall, over the objection of the head of the family, enter any house used exclusively as a family residence. The chief of said bureau may from time to time publish the results of these investigations in such manner and to such extent as may be prescribed by the Secretary of Commerce and Labor.

SEC. 3. That there shall be in said bureau, until otherwise provided for by law, an assistant chief, to be appointed by the Secretary of Commerce and Labor, who shall receive an annual compensation of two thousand four hundred dollars; one private secretary to the chief of the bureau, who shall receive an annual compensation of one thousand five hundred dollars; one statistical expert, at two thousand dollars; two clerks of class four; two clerks of class three; one clerk of class two; one clerk of class one; one clerk, at one thousand dollars; one copyist, at nine hundred dollars; one special agent, at one thousand four hundred dollars; one special agent, at one thousand two hundred dollars, and one messenger at eight hundred and forty dollars

SEC. 4. That the Secretary of Commerce and Labor is hereby directed to furnish sufficient quarters for the work of this bureau at an annual rental not to exceed two thousand dollars.

SEC. 5. That this Act shall take effect and be in force from and after its passage.

Approved, April 9, 1912.

¹ Transferred from Department of Commerce and Labor to Department of Labor by Act approved March 4, 1913.

CONTENTS.

	Page.
Letter of transmittal.....	5
Introduction.....	7
Scope of Part 1.....	7
Number of children.....	9
Sex.....	10
Race.....	11
Nativity and parentage.....	13
Geographic distribution.....	14
State distribution.....	17
Size of communities.....	17

GENERAL TABLES.

Children of the several States, by race, nativity, and parentage, census of 1910:	
Table 1.—Children under 15 years.....	20
Table 2.—Children under 1 year.....	21
Table 3.—Children under 5 years.....	22
Table 4.—Children 5 to 9 years.....	23
Table 5.—Children 10 to 14 years.....	24
Table 6.—Children 15 to 19 years.....	25
Boys of the several States, by race, nativity, and parentage, census of 1910:	
Table 7.—Boys under 15 years.....	26
Table 8.—Boys under 1 year.....	27
Table 9.—Boys under 5 years.....	28
Table 10.—Boys 5 to 9 years.....	29
Table 11.—Boys 10 to 14 years.....	30
Table 12.—Boys 15 to 19 years.....	31
Girls of the several States, by race, nativity, and parentage, census of 1910:	
Table 13.—Girls under 15 years.....	32
Table 14.—Girls under 1 year.....	33
Table 15.—Girls under 5 years.....	34
Table 16.—Girls 5 to 9 years.....	35
Table 17.—Girls 10 to 14 years.....	36
Table 18.—Girls 15 to 19 years.....	37
Urban and rural children of the several States, by race and nativity, census of 1910:	
Table 19.—Children under 15 years.....	38
Table 20.—Children under 1 year.....	39
Table 21.—Children under 5 years.....	40
Table 22.—Children 5 to 9 years.....	41
Table 23.—Children 10 to 14 years.....	42
Table 24.—Children 15 to 19 years.....	43

Urban and rural children of the several States, by sex, census of 1910:

Table 25.—Children under 15 years.....	44
Table 26.—Children under 1 year	45
Table 27.—Children under 5 years.....	46
Table 28.—Children 5 to 9 years.....	47
Table 29.—Children 10 to 14 years.....	48
Table 30.—Children 15 to 19 years.....,.....	49

Children of the several geographic divisions, by size of communities in which they live, with percentage living in communities of specified size, census of 1910:

Table 31.—Children under 15 years.....	50
Table 32.—Children under 5 years.....	50
Table 33.—Children 5 to 14 years.....	50

Children of cities having a population of 25,000 or over, by sex, race, and nativity, census of 1910:

Table 34.—Children under 15 years.....	51
Table 35.—Children under 1 year	60
Table 36.—Children under 5 years.....	68
Table 37.—Children 5 to 9 years.....	76
Table 38.—Children 10 to 14 years.....	84
Table 39.—Children 15 to 19 years.....	92

LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF LABOR,
CHILDREN'S BUREAU,
Washington, D. C., June 24, 1913.

SIR: I transmit herewith a statistical report showing the number of children in the United States according to the census of 1910, and their sex, age, race, nativity, parentage, and geographic distribution.

This constitutes Part 1 of a statistical handbook designed to bring together in a convenient form the available official statistics regarding children. We hope to follow this with other parts, as fast as they can be prepared with our limited force, relating to the proportion of children, the birth rate, and infant mortality, illiteracy and school attendance, child labor, and the defective, dependent, and delinquent children.

The preparation of these reports is under the immediate supervision of Mr. Lewis Meriam, the assistant chief of the Children's Bureau. He desires that special mention be made of the faithful service of Miss Lillian M. Lewis, who has prepared most of the tabular matter.

Very respectfully,

JULIA C. LATHROP,
Chief of Bureau.

Hon. WILLIAM B. WILSON,
Secretary of Labor.

HANDBOOK OF FEDERAL STATISTICS OF CHILDREN.

INTRODUCTION.

Several Government bureaus have in the past collected statistical material relating to children, but it is scattered through numerous volumes of official reports and has never been brought together and correlated by anyone interested primarily in its relation to the problems of child welfare. The object of this statistical handbook is to perform that task; to bring the material together, to digest, correlate, and annotate it, so that the user may have in convenient form a summary of the available data. The basic figures in this handbook are not new, but in most cases the arrangement and the derivative figures are.

SCOPE OF PART 1.

Part 1 of the handbook is concerned with the number of children, their age, sex, race, nativity, parentage, and geographic distribution. It is designed to answer the questions: "How many children of each class are there?" and "Where are they?"

The first question which arises in the compilation of such statistics is at what age shall the line be drawn between childhood and adult life. The age at which it is drawn in legislation affecting children differs for different purposes, and often differs for the same purpose in different States. For instance, a boy does not become an adult capable of binding himself by an ordinary contract until he is 21 years old, but he can generally marry at a considerably earlier age. The variation between the States in respect to the ages below which children are protected from the evils of child labor is notorious; and often, very reasonably, the child-labor laws of a State will prescribe different ages for different occupations or for different types of children. Thus, so far as the law is concerned, there is no clearly recognized dividing line between childhood and adult life.

The 1910 census returns thus far published do not show the number of persons at each individual year of age, but give the number in each five-year age period beginning with "under 5." The period of life from birth to the twentieth birthday is thus divided into four periods:

“Under 5 years,” “5 to 9 years,” “10 to 14 years,” and “15 to 19 years.” By adding the numbers in the first three of these periods together the total number of children under 15 years of age is secured; and the period of life from birth to the fifteenth birthday probably coincides as closely as any other with the popular conception of the years of childhood. In most of the general tables in this section of the handbook the number of children in the different quinquennial age periods under 20 are shown separately and in addition a total is presented for the children under 15.

Attention should perhaps be called to the fact that the number of children at any given year of age can be determined with a close approach to accuracy by dividing by five the total for the quinquennial period into which the given age falls. For example, in estimating the number of children 16 years of age the number in the quinquennial period 15 to 19 would be divided by 5. In a natural population—that is, in a population not influenced by immigration or emigration—this method tends to understate the number of children in the lower ages of the five-year period and to overstate the number in the higher ages, provided, of course, the population is not decreasing; but the percentage of error is so slight that it can generally be safely ignored, except in work demanding great refinement.¹ The error is,

¹ It is rather interesting to compare the results of this method of estimating, as applied to the four quinquennial periods of childhood, with the results of an enumeration by single year of age. This of course can not yet be done for 1910, but it is done for 1900 in the following table, which gives the percentage which the actual number enumerated as of the specified age forms of the estimated number:

AGE.	CHILDREN UNDER 20 YEARS OF AGE, CENSUS OF 1900.	
	Number.	Per cent which actual number in given age forms of number computed on hypothesis of even distribution.
Under 5 years.....	9,189,448	.....
Number in each year under 5 as computed on hypothesis that the number at each age was the same.....	1,837,890	.....
Actual number:		
Under 1 year.....	1,920,987	104.5
1 year.....	1,771,575	96.4
2 years.....	1,834,188	99.8
3 years.....	1,828,171	99.5
4 years.....	1,834,527	99.8
5 to 9 years.....	8,889,339	.....
Number in each year from 5 to 9 as computed on hypothesis that the number at each age was the same.....	1,777,868	.....
Actual number:		
5 years.....	1,811,958	101.9
6 years.....	1,835,843	103.3
7 years.....	1,785,865	100.4
8 years.....	1,783,509	100.3
9 years.....	1,672,164	94.1
10 to 14 years.....	8,091,951	.....

of course, greatest in estimating the number in the individual years under 5, because the mortality of children in the first year of life is so high that the number less than 1 year old is much greater than the number a year old. Fortunately, the number of children enumerated as under 1 year of age has been published by the Census Bureau for 1910, and it has been reproduced in these tables. A more accurate estimate of the number at the other ages under 5 can therefore be made by subtracting those under 1 from the total under 5 and dividing the difference by 4.

NUMBER OF CHILDREN.

On April 15, 1910, according to the Federal census, there were in the United States 40,417,361 persons under 21 years of age and they formed 43.9 per cent of the total population of the country. The distribution of this great body of minors according to their ages is presented in Table I, which shows the percentage which the children of the specified age form of the entire population of the United States.

(Footnote—Continued.)

AGE.	CHILDREN UNDER 20 YEARS OF AGE, CENSUS OF 1900.	
	Number.	Per cent which actual number in given age forms of number computed on hypothesis of even distribution.
Number in each year from 10 to 14 as computed on hypothesis that the number at each age was the same.....	1,618,390	.....
Actual number:		
10 years.....	1,743,383	107.7
11 years.....	1,585,080	97.9
12 years.....	1,640,005	101.3
13 years.....	1,552,537	95.9
14 years.....	1,570,946	97.1
15 to 19 years.....	7,577,324	.....
Number in each year from 15 to 19 as computed on hypothesis that the number at each age was the same.....	1,515,465	.....
Actual number:		
15 years.....	1,535,509	101.3
16 years.....	1,564,271	103.2
17 years.....	1,492,422	98.5
18 years.....	1,539,185	101.6
19 years.....	1,445,937	95.4

Figures for individual years of age, even as enumerated in a census, are not absolutely accurate. The facts regarding all the members of a family are often given the enumerator by the person who happens to be at home when he calls, and in making the statements as to age there is a tendency, clearly recognizable in the results, to give, in reporting the age of adults, an age ending in a five or a zero; and the figures above suggest that in reporting the age of children the general tendency is to prefer an age ending in an even number. Possibly these two tendencies combine at age 10, for at that age the relative difference between the number as enumerated and the number as estimated is greatest, the number enumerated being 107.7 per cent of the number estimated. In this case the number enumerated is probably an overstatement and the number estimated an understatement, the true number lying between. The other figures tend to show that the method of estimating gives results sufficiently reliable for rough work.

TABLE I	AGE.	CENSUS OF 1910.	
		Number of children of specified age.	Per cent which children of specified age form of the total population.
	Under 21 years.....	40,417,361	43.9
	Under 20 years.....	38,562,739	41.9
	Under 15 years.....	29,499,136	32.1
	Under 10 years.....	20,391,996	22.2
	Under 5 years.....	10,631,364	11.6
	Under 1 year.....	2,217,342	2.4
	5 to 9 years.....	9,760,632	10.6
	10 to 14 years.....	9,107,140	9.9
	15 to 19 years.....	9,063,603	9.9
	20 years.....	1,854,622	2.0

Persons under 15 years of age, the group which is generally thought of when children are mentioned, number 29,499,136 and form about one-third of the whole population. Babies under a year old number over 2,000,000 and make up almost one-fortieth of the people. It is generally believed that the census tends to understate the number of infants, possibly because some of them are omitted by the enumerators but more probably because mothers are likely to call their babies a year old when they are, in fact, only 10 or 11 months old. In the first case the babies do not appear in the census at all, and in the second case they appear as children 1 year old.

SEX.

The number of boys and girls is always very nearly equal, but the boys predominate slightly. The following table shows the number of boys and the number of girls at each age period and the number of boys to each 100 girls.

TABLE II	AGE.	CENSUS OF 1910.		
		Number of boys of specified age.	Number of girls of specified age.	Number of boys to each 100 girls.
	Under 21 years.....	20,333,126	20,084,235	101.2
	Under 20 years.....	19,433,754	19,128,985	101.6
	Under 15 years.....	14,906,472	14,592,664	102.2
	Under 10 years.....	10,304,719	10,087,277	102.2
	Under 5 years.....	5,380,596	5,250,768	102.5
	Under 1 year.....	1,123,409	1,093,933	102.7
	5 to 9 years.....	4,924,123	4,836,509	101.8
	10 to 14 years.....	4,601,753	4,505,387	102.1
	15 to 19 years.....	4,527,282	4,536,321	99.8
	20 years.....	899,372	955,250	94.2

Among the babies under 1 year of age there were, in 1910, 102.7 boys to each 100 girls, the boys outnumbering the girls by 29,476. Judging from the figures here given one would say that the excess of

boys disappears at the ages 15 to 19 but it is very doubtful whether this is a fact. Census age figures are very seriously affected by the women who understate their ages, and this understatement carries into the age period from 15 to 19 years many women who should be in the older age periods. Among men there is probably no corresponding tendency and hence in the age period 15 to 19 the women outnumber the men, though at all other quinquennial age periods below 75 years there are more men than women.

This understatement of age means that certain women, older than 21 years of age, appear in the statistics as children. Exactly how many such cases there may be it is of course impossible to say, but the number probably does not greatly exceed 167,000 and most of these women are reported in the older ages of childhood, that is, from 16 to 20 years.¹

RACE.

The following table shows the number of children of the different races and the percentage which the children of each race form of the total number of children at specified ages:

TABLE III		CHILDREN ENUMERATED IN CENSUS OF 1910.				
AGE.		Total.	White.	Negro.	Indian.	Chinese, Japanese, and all other.
Under 21 years.....		40,417,361	35,315,207	4,941,148	142,547	18,459
Under 20 years.....		38,562,739	33,684,886	4,725,523	136,804	15,526
Under 15 years.....		29,499,136	25,716,495	3,665,107	108,318	9,216
Under 10 years.....		20,391,996	17,798,087	2,509,841	76,925	7,143
Under 5 years.....		10,631,364	9,322,914	1,263,288	40,384	4,778
Under 1 year.....		2,217,342	1,955,605	252,386	8,216	1,135
5 to 9 years.....		9,760,632	8,475,173	1,246,553	36,541	2,365
10 to 14 years.....		9,107,140	7,918,408	1,155,266	31,393	2,073
15 to 19 years.....		9,063,603	7,968,391	1,060,416	28,486	6,310
20 years of age.....		1,854,622	1,630,321	215,625	5,743	2,933
PER CENT WHICH CHILDREN OF SPECIFIED RACE FORM OF ALL CHILDREN OF GIVEN AGE.						
Under 21 years.....		100	87.4	12.2	0.4	(2)
Under 20 years.....		100	87.4	12.3	.4	(2)
Under 15 years.....		100	87.2	12.4	.4	(2)
Under 10 years.....		100	87.3	12.3	.4	(2)
Under 5 years.....		100	87.7	11.9	.4	(2)
Under 1 year.....		100	88.2	11.4	.4	0.1
5 to 9 years.....		100	86.8	12.8	.4	(2)
10 to 14 years.....		100	86.9	12.7	.3	(2)
15 to 19 years.....		100	87.9	11.7	.3	.1
20 years of age.....		100	87.9	11.6	.3	.2

¹ The number 167,000 is arrived at by assuming that at ages 15 to 19 and at age 20 the number of boys to 100 girls is 102.1, just as it is at ages 10 to 14, and that the number of boys reported at 15 to 19 and at 20 is a reasonably true statement.

For a discussion of the evidence which leads to the belief that the excess of females at ages 15 to 20 is due to an understatement of age see "The proportion of the sexes," Supplementary Analysis of the Twelfth Census, p. 101.

² Less than one-tenth of 1 per cent.

Roughly speaking, seven children out of every eight in this country are white. The rest are mostly negroes, for there are only 142,547 Indians and 18,459 Chinese, Japanese, and other colored under 21 years of age. The relative numerical importance of the races is practically the same at all the ages shown in the table, though the percentage which the negroes form of the infants under 1 year of age is peculiarly low. Too much weight should not be attached to this fact, because it is possible that it may result from a less accurate report of babies' ages among that class of the population or from a less complete and thorough enumeration of negro babies.

The number of boys and the number of girls of each race are shown in Table IV:

TABLE IV	CHILDREN ENUMERATED IN CENSUS OF 1910.					
	AGE.	Total.	White.	Negro.	Indian.	Chinese, Japanese, and all other.
BOYS.						
Under 21 years.....	20,333,126	17,820,731	2,427,008	72,166	13,221	
Under 20 years.....	19,433,754	17,019,263	2,334,514	69,362	10,615	
Under 15 years.....	14,906,472	13,020,120	1,826,569	54,750	5,033	
Under 10 years.....	10,304,719	9,014,016	1,248,495	38,551	3,657	
Under 5 years.....	5,380,596	4,728,650	629,320	20,202	2,424	
Under 1 year.....	1,123,409	993,242	125,459	4,127	581	
5 to 9 years.....	4,924,123	4,285,366	619,175	18,349	1,233	
10 to 14 years.....	4,601,753	4,006,104	578,074	16,199	1,376	
15 to 19 years.....	4,527,282	3,999,143	507,945	14,612	5,582	
20 years.....	899,372	801,468	92,494	2,804	2,606	
GIRLS.						
Under 21 years.....	20,084,235	17,494,476	2,514,140	70,381	5,238	
Under 20 years.....	19,128,985	16,665,623	2,391,009	67,442	4,911	
Under 15 years.....	14,592,664	12,696,375	1,838,538	53,568	4,183	
Under 10 years.....	10,087,277	8,784,071	1,261,346	38,374	3,496	
Under 5 years.....	5,250,768	4,594,264	633,968	20,182	2,354	
Under 1 year.....	1,093,933	962,363	126,927	4,089	554	
5 to 9 years.....	4,836,509	4,189,807	627,378	18,192	1,132	
10 to 14 years.....	4,505,387	3,912,304	577,192	15,194	697	
15 to 19 years.....	4,536,321	3,969,248	552,471	13,874	728	
20 years.....	955,250	828,853	123,131	2,939	327	

Except in the case of the negroes, the number of boys exceeds the number of girls at each age period shown in the table. Among the negroes the girls exceed the boys at all ages except 10 to 14. Among the negro babies under 1 year old there were 125,459 boys and 126,927 girls, or 98.8 boys per 100 girls.

NATIVITY AND PARENTAGE.

The nativity and parentage of the white children is given in the following table, which shows the percentage which the children in each class form of the total number of all children, both white and colored:

AGE.	WHITE CHILDREN ENUMERATED IN CENSUS OF 1910.				
	Total.	Native.			Foreign born.
		Total.	Both par- ents native.	One or both par- ents for- eign born.	
Under 21 years.....	35,315,207	33,623,587	23,792,363	9,831,224	1,691,620
Under 20 years.....	33,684,886	32,251,779	22,820,635	9,431,144	1,433,107
Under 15 years.....	25,716,495	24,957,149	17,731,580	7,225,569	759,346
Under 10 years.....	17,798,087	17,297,071	12,407,297	4,989,774	401,016
Under 5 years.....	9,322,914	9,220,407	6,546,282	2,674,125	102,507
Under 1 year.....	1,955,605	1,948,870	1,369,140	579,730	6,735
5 to 9 years.....	8,475,173	8,176,664	5,861,015	2,315,649	298,509
10 to 14 years.....	7,918,408	7,560,078	5,324,283	2,235,795	358,330
15 to 19 years.....	7,968,391	7,294,630	5,069,055	2,205,575	673,761
20 years.....	1,630,321	1,371,808	971,728	400,080	258,513
PERCENTAGE WHICH CHILDREN OF SPECIFIED NATIVITY FORM OF ALL CHILDREN, WHITE OR COLORED, OF GIVEN AGE.					
Under 21 years.....	87.4	83.2	58.9	24.3	4.2
Under 20 years.....	87.4	83.6	59.2	24.5	3.7
Under 15 years.....	87.2	84.6	60.1	24.5	2.6
Under 10 years.....	87.3	85.3	60.8	24.5	2.0
Under 5 years.....	87.7	86.7	61.6	25.2	1.0
Under 1 year.....	88.2	87.9	61.7	26.1	.3
5 to 9 years.....	86.8	83.8	60.0	23.7	3.1
10 to 14 years.....	86.9	83.0	58.5	24.5	3.9
15 to 19 years.....	87.9	80.5	56.1	24.3	7.4
20 years.....	87.9	73.9	52.4	21.6	13.9

The number of white children who are themselves foreign born is comparatively small, especially among the young children. Of the total number under 5 years of age only 102,507, or 1 per cent, are foreign-born white. Native white children with one or both parents foreign born; that is, white children born in this country of immigrant parents, or with one parent an immigrant, are numerous, forming in each age group approximately one-fourth of all the children. Most of the children are, however, native white of native parentage; that is, born in the United States of parents who were both born in this country. Children of this class under 15 years of age number 17,731,580 and form 60.1 per cent of all children of that age.

The number of boys and the number of girls in each of these classes of white children is given in the following table:

TABLE VI		WHITE CHILDREN ENUMERATED IN CENSUS OF 1910.				
AGE.	Total.	Native.			Foreign born.	
		Total.	Both par- ents native.	One or both par- ents for- eign born.		
BOYS.						
Under 21 years.....	17,820,731	16,943,760	12,017,487	4,926,273	876,971	
Under 20 years.....	17,019,263	16,283,614	11,548,651	4,734,963	735,649	
Under 15 years.....	13,020,120	12,636,225	8,996,123	3,640,102	383,895	
Under 10 years.....	9,014,016	8,811,424	6,295,467	2,515,957	202,592	
Under 5 years.....	4,728,650	4,676,710	3,326,237	1,350,473	51,940	
Under 1 year.....	993,242	989,715	696,200	293,515	3,527	
5 to 9 years.....	4,285,366	4,134,714	2,969,230	1,165,484	150,652	
10 to 14 years.....	4,006,104	3,824,801	2,700,656	1,124,145	181,303	
15 to 19 years.....	3,999,143	3,647,389	2,552,528	1,094,861	351,754	
20 years.....	801,468	660,146	468,836	191,310	141,322	
GIRLS.						
Under 21 years.....	17,494,476	16,679,827	11,774,876	4,904,951	814,649	
Under 20 years.....	16,665,623	15,968,165	11,271,984	4,696,181	697,458	
Under 15 years.....	12,696,375	12,320,924	8,735,457	3,585,467	375,451	
Under 10 years.....	8,784,071	8,585,647	6,111,830	2,473,817	198,424	
Under 5 years.....	4,594,264	4,543,697	3,220,045	1,323,652	50,567	
Under 1 year.....	962,363	959,155	672,940	286,215	3,208	
5 to 9 years.....	4,189,807	4,041,950	2,891,785	1,150,165	147,857	
10 to 14 years.....	3,912,304	3,735,277	2,623,627	1,111,650	177,027	
15 to 19 years.....	3,909,248	3,647,241	2,536,527	1,110,714	322,007	
20 years.....	828,853	711,662	502,892	208,770	117,191	

The excess of males over females, previously noted, is common to all classes of white children except the native whites with one or both parents foreign born in the age periods 15 to 19. At that age the figures show 1,094,861 native white boys of foreign or mixed parentage as contrasted with 1,110,714 girls of that class. This apparent excess of females may not be a true statement of the facts but may possibly result from the understatement of ages on the part of a considerable number of women who in fact belong in the older age group.¹

GEOGRAPHIC DISTRIBUTION.

The percentage which the children in each geographic division form of the total number in the country as a whole is shown on the following page for those under 15 years of age. The composition of the different geographic divisions is given in the tables on pages 20 to 49, where the States are arranged geographically.

Almost all the figures presented in the general tables are given for each State as well as for the United States as a whole. In grouping the States in geographic divisions the Children's Bureau has used the form followed by the Bureau of the Census, from whose reports

¹ For a discussion of the understatement of age, see p. 11.

the basic figures have been taken. Because of the large number of States it is extremely difficult to exhibit the broad geographic conditions regarding population by means of comparisons among individual States. In addition, therefore, to the presentation of statistics by States they are given for nine groups of States which are designated as geographic divisions. The reasons for thus grouping the States is explained by the Bureau of the Census as follows: ¹

“This plan reduces the comparisons necessary to a general understanding of the geographic differences in conditions to a number which can be readily grasped. The States within each of these divisions are for the most part fairly homogeneous in physical characteristics, as well as in the characteristics of their population and their economic and social conditions, while on the other hand each division differs more or less sharply from most others in these respects. In forming these groups of States the lines have been based partly on physical and partly on historical conditions.

The grouping of these States in geographic divisions has facilitated a geographical rather than an alphabetical order in the tables which present the results for individual States. The advantage of this geographical order lies in the greater ease with which conditions in contiguous States can be compared.”

GEOGRAPHIC DIVISION.	CHILDREN UNDER 15 YEARS OF AGE, CENSUS OF 1910: PER CENT WHICH THOSE IN GIVEN GEOGRAPHIC DIVISION FORM OF THE TOTAL NUMBER IN THE UNITED STATES.					
	Total.	Native white.			Foreign-born white.	Negro.
		Total.	Both parents native.	One or both parents foreign born.		
The United States.....	100.0	100.0	100.0	100.0	100.0	100.0
New England.....	6.0	6.9	4.0	13.2	14.7	0.4
Middle Atlantic.....	19.0	21.4	15.6	33.4	42.4	2.6
East North Central.....	18.3	20.7	19.3	24.1	19.3	1.9
West North Central.....	12.6	14.1	13.8	15.6	8.3	1.6
South Atlantic.....	15.5	11.4	15.6	2.0	2.4	44.7
East South Central.....	10.9	8.5	12.0	.7	.5	27.6
West South Central.....	11.5	10.1	13.2	3.2	4.4	20.8
Mountain.....	2.8	3.1	3.0	3.1	3.1	.1
Pacific.....	3.5	3.9	3.4	4.8	4.9	.1

This table brings out the great differences in the geographic distribution of the several classes of children under 15. The negro children are located almost exclusively in the South and Southwest, 44.7 per cent being in the South Atlantic division, 27.6 in the East South Central, and 20.8 per cent in the West South Central. These three divisions contain 93.1 per cent of all the negro children in the country.

¹ “Abstract of the Thirteenth Census of the United States,” 1910, p. 14.

The foreign-born white children and the native white children of foreign or mixed parentage, on the other hand, are located mainly in the New England, Middle Atlantic, and North Central States. Of the foreign-born white children under 15, 42.4 per cent are in the Middle Atlantic States, 19.3 per cent in the East North Central, 14.7 in New England, and 8.3 in the West North Central, making a total for these four divisions of 84.7 per cent of all foreign-born white children. Of the native white of foreign parentage these divisions contain 86.3 per cent. The native white children of native parentage are much more evenly distributed. The highest percentage found in any one division is 19.3 in the East North Central and the lowest, 3, in the sparsely settled Mountain States.

The figures mean, of course, that the composition of the child population is very different in the different sections of the country. The following table shows the percentage which the children of each class make up of all the children in each geographic division:

GEOGRAPHIC DIVISION.	CHILDREN UNDER 15 YEARS OF AGE, CENSUS OF 1910: PER CENT OF THE TOTAL NUMBER IN THE SPECIFIED DIVISION FORMED BY—					
	Native white.			Foreign born white.	Negro.	All other.
	Total.	Both parents native.	One or both parents foreign born.			
The United States.....	84.6	60.1	24.5	2.6	12.4	0.4
New England.....	92.8	39.3	53.5	6.2	0.9	(1)
Middle Atlantic.....	92.5	49.3	43.2	5.8	1.7	(1)
East North Central.....	95.9	63.5	32.4	2.7	1.3	0.1
West North Central.....	96.3	66.0	30.3	1.7	1.6	.4
South Atlantic.....	63.7	60.6	3.1	.4	35.8	.1
East South Central.....	68.2	66.7	1.5	.1	31.6	(1)
West South Central.....	75.5	68.8	6.7	1.0	22.4	1.1
Mountain.....	92.9	65.4	27.5	2.9	.5	3.7
Pacific.....	93.9	60.1	33.9	3.6	.5	1.9

¹ Less than one-tenth of 1 per cent.

Native white children with both parents born in this country constitute more than half the child population under 15 years of age in all sections of the country except New England and the Middle Atlantic States; and in the Middle Atlantic States they just miss forming half. In New England only two children out of five (39.3 per cent) are native whites of native parentage, and a majority (53.5 per cent) are native whites with one or both parents foreign born. Almost three children out of every five in New England were either themselves born in a foreign country or had one or both parents who were born in a foreign country. In no other section of the country is the percentage formed by the children of foreign birth or parentage so high.

In the South Atlantic and the East and West South Central divisions the children of foreign birth or foreign or mixed parentage form only a very small percentage of the total number of children. In these divisions the negro children are numerous, the percentage which they form of all children in the division being 35.8 for the South Atlantic, 31.6 for the East South Central, and 22.4 for the West South Central.

STATE DISTRIBUTION.

The rank of the different States according to the absolute number of children under 15 years of age is shown in the following tabular statement:

STATE.	CHILDREN UNDER 15 YEARS OF AGE.		STATE.	CHILDREN UNDER 15 YEARS OF AGE.	
	Number.	Rank of State.		Number.	Rank of State.
New York.....	2,488,621	1	Kansas.....	537,696	26
Pennsylvania.....	2,368,926	2	West Virginia.....	448,324	27
Illinois.....	1,665,812	3	Maryland.....	401,001	28
Texas.....	1,504,430	4	Nebraska.....	389,964	29
Ohio.....	1,343,976	5	Connecticut.....	309,002	30
Georgia.....	1,039,227	6	Washington.....	301,236	31
Missouri.....	1,022,926	7	Florida.....	268,216	32
Massachusetts.....	908,692	8	Colorado.....	227,866	33
North Carolina.....	893,656	9	North Dakota.....	211,718	34
Alabama.....	849,714	10	Maine.....	203,066	35
Michigan.....	832,401	11	South Dakota.....	200,443	36
Kentucky.....	820,166	12	Oregon.....	172,910	37
Tennessee.....	806,938	13	Rhode Island.....	149,559	38
Indiana.....	796,039	14	Utah.....	138,643	39
Virginia.....	762,878	15	New Mexico.....	120,719	40
Wisconsin.....	750,203	16	New Hampshire.....	112,725	41
New Jersey.....	737,916	17	Idaho.....	108,478	42
Mississippi.....	723,848	18	Montana.....	102,188	43
Iowa.....	687,062	19	Vermont.....	98,279	44
Minnesota.....	661,475	20	District of Columbia.....	76,630	45
Oklahoma.....	645,748	21	Arizona.....	64,786	46
Louisiana.....	636,603	22	Delaware.....	58,550	47
South Carolina.....	629,645	23	Wyoming.....	39,209	48
Arkansas.....	620,241	24	Nevada.....	16,989	49
California.....	543,796	25			

New York stands first with 2,488,621 children under 15 and Pennsylvania second, with almost as many, 2,368,926. The other States having over 1,000,000 children of this age, ranking in the order named, are Illinois, Texas, Ohio, Georgia, and Missouri. The smallest number of children is reported by Nevada, 16,989, and the next smallest by Wyoming, 39,209.

SIZE OF COMMUNITIES.

In Tables 31 to 33, page 50, the children are divided into four classes according to the size of the communities in which they live; whether cities of 100,000 inhabitants or over, cities of from

25,000 to 100,000, places of from 2,500 to 25,000, or rural districts. These figures are given for geographic divisions with the percentage which the children in each class of communities form of the total number in the specified division.

In the United States as a whole there are almost five-and-a-half million children under 15 growing up in the cities of 100,000 inhabitants or over. Not quite one child in five lives in a big city. In the Middle Atlantic States the proportion is more than two in five (43.4 per cent); in the Pacific States more than one in four (28.2 per cent), and in New England and the East North Central States a little less than one in four (24.5 per cent and 23.7 per cent, respectively).

The great body of children under 15 are, however, still to be found in the distinctly rural districts and in the communities of less than 2,500 inhabitants. The total number of children in rural communities of less than 2,500 inhabitants is 17,897,520, which is 60.7 per cent of the total number in the country. The lowest percentage of country children is found in New England (16.6) and the highest (86.4 per cent) in the East South Central States. The percentage is very high in all the Southern States.

The children in cities having 25,000 or over are shown in Tables 34 to 39, classified by sex, race, and nativity.

GENERAL TABLES.

TABLE 1.—CHILDREN UNDER 15 YEARS OF AGE, BY RACE, NATIVITY,
AND PARENTAGE, FOR STATES: CENSUS OF 1910.

TABLE 1

TABLE 1

TABLE 1

TABLE 1

¹ Includes Indian, Chinese, Japanese, and all other.

TABLE 2.—CHILDREN UNDER 1 YEAR OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

1	2	3	4	5

¹ Includes Indian, Chinese, Japanese, and all other.

TABLE 3.—CHILDREN UNDER 5 YEARS OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total. ¹	NATIVE WHITE.			Foreign-born white.	Negro.
		Total.	Both parents native.	One or both parents foreign born.		
United States.....	10,631,364	9,220,407	6,546,282	2,674,125	102,507	1,263,288
New England.....	640,825	618,574	250,625	367,949	16,105	5,876
Maine.....	71,845	70,118	45,777	24,341	1,519	117
New Hampshire.....	39,581	38,416	19,109	19,307	1,122	40
Vermont.....	34,171	33,343	23,657	9,686	722	102
Massachusetts.....	328,886	316,870	108,005	208,865	8,457	3,448
Rhode Island.....	54,098	51,487	16,347	35,140	1,704	862
Connecticut.....	112,244	108,340	37,730	70,610	2,581	1,307
Middle Atlantic.....	2,050,139	1,975,894	992,447	983,447	38,007	35,298
New York.....	898,927	867,152	361,400	505,752	20,845	10,061
New Jersey.....	266,942	253,635	114,416	139,219	5,360	7,922
Pennsylvania.....	884,270	855,107	516,631	338,476	11,802	17,315
East North Central.....	1,907,713	1,860,957	1,252,251	608,706	20,898	23,428
Ohio.....	479,475	466,080	355,022	111,058	4,453	8,921
Indiana.....	275,524	269,747	243,438	26,309	985	4,763
Illinois.....	597,989	581,260	347,529	233,731	8,417	8,248
Michigan.....	298,554	291,752	164,742	127,010	4,586	1,285
Wisconsin.....	256,171	252,118	141,520	110,598	2,457	211
West North Central.....	1,310,909	1,277,506	917,228	360,278	8,583	19,127
Minnesota.....	226,840	223,022	101,321	121,701	2,143	382
Iowa.....	236,063	233,548	178,844	54,704	1,207	1,245
Missouri.....	360,503	346,902	310,107	36,795	1,257	12,299
North Dakota.....	82,399	80,017	31,110	48,907	1,397	37
South Dakota.....	73,489	70,251	42,022	28,229	609	60
Nebraska.....	140,096	138,259	96,668	41,591	883	477
Kansas.....	191,519	185,507	157,156	28,351	1,087	4,627
South Atlantic.....	1,657,219	1,082,498	1,027,812	54,686	2,575	570,516
Delaware.....	20,045	16,841	13,038	3,803	115	3,089
Maryland.....	137,714	111,114	90,049	21,065	610	25,967
District of Columbia.....	26,669	19,222	15,476	3,746	139	7,290
Virginia.....	268,825	181,949	176,965	4,984	232	86,555
West Virginia.....	169,118	161,401	151,585	9,816	739	6,974
North Carolina.....	332,792	224,028	222,869	1,159	60	107,297
South Carolina.....	228,459	99,639	98,624	1,015	46	128,712
Georgia.....	376,641	209,026	206,419	2,607	91	167,496
Florida.....	96,956	59,278	52,787	6,491	543	37,114
East South Central.....	1,160,471	811,745	796,697	15,048	426	347,803
Kentucky.....	294,503	268,805	262,927	5,878	113	25,541
Tennessee.....	294,591	237,879	234,792	3,087	99	56,580
Alabama.....	311,716	187,380	183,253	4,127	151	123,991
Mississippi.....	259,661	117,681	115,725	1,956	63	141,691
West South Central.....	1,235,658	957,314	877,638	79,676	5,909	258,012
Arkansas.....	230,701	173,191	169,391	3,800	107	57,330
Louisiana.....	224,069	131,165	119,812	11,353	326	92,439
Oklahoma.....	241,904	209,343	199,142	10,201	280	18,186
Texas.....	538,984	443,615	389,293	54,322	5,196	90,057
Mountain.....	305,804	288,996	207,466	81,530	4,226	1,350
Montana.....	38,323	36,008	20,167	15,841	746	105
Idaho.....	40,444	39,710	31,561	8,149	253	40
Wyoming.....	15,331	14,803	10,218	4,585	206	109
Colorado.....	82,562	80,623	56,192	24,431	978	708
New Mexico.....	45,285	41,260	37,019	4,241	494	150
Arizona.....	24,778	19,116	11,130	7,986	1,056	156
Utah.....	52,698	51,725	37,324	14,401	425	56
Nevada.....	6,383	5,751	3,855	1,896	68	26
Pacific.....	362,626	346,923	224,118	122,805	5,778	1,878
Washington.....	108,756	104,499	66,713	37,786	1,826	289
Oregon.....	60,211	58,669	44,584	14,085	658	70
California.....	193,659	183,755	112,821	70,934	3,294	1,519

¹ Includes Indian, Chinese, Japanese, and all other.

TABLE 4.—CHILDREN 5 TO 9 YEARS OF AGE, BY SEX, COLOR, AND PARENTAGE,

TIVITY, AND

7

13

100

¹ Includes Indian, Chinese, Japanese, and all other.

TABLE 5.—CHILDREN 10 TO 14 YEARS OF AGE,
PARENTAGE,

ACTIVITY, AND

1

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¹ Includes Indian, Chinese, Japanese, and all other.

TABLE 6.—CHILDREN 15 TO 19 YEARS OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total. ¹	NATIVE WHITE.			Foreign-born white.	Negro.
		Total.	Both parents native.	One or both parents foreign born.		
United States.....	9,063,603	7,294,630	5,089,055	2,205,575	673,761	1,060,416
New England.....	583,787	464,195	220,873	243,322	114,100	5,150
Maine.....	65,136	57,321	41,114	16,207	7,562	145
New Hampshire.....	37,906	30,369	17,438	12,931	7,480	53
Vermont.....	31,161	28,265	20,665	7,600	2,798	97
Massachusetts.....	296,561	230,969	92,113	138,856	62,540	2,870
Rhode Island.....	51,998	38,325	14,425	23,900	12,873	772
Connecticut.....	101,025	78,946	35,118	43,828	20,847	1,213
Middle Atlantic.....	1,801,469	1,462,895	844,614	618,281	304,375	32,652
New York.....	842,449	649,255	319,190	330,065	182,629	9,818
New Jersey.....	236,541	188,797	98,344	90,453	40,247	7,428
Pennsylvania.....	722,479	624,843	427,080	197,763	81,499	15,406
East North Central.....	1,760,453	1,614,205	1,005,629	608,576	118,609	25,639
Ohio.....	446,912	410,623	309,180	101,443	26,392	9,855
Indiana.....	259,149	248,485	217,257	31,228	5,150	5,452
Illinois.....	544,891	484,911	270,851	214,060	51,135	8,731
Michigan.....	266,830	243,024	117,366	125,658	21,641	1,378
Wisconsin.....	242,671	227,162	90,975	136,187	14,291	223
West North Central.....	1,184,593	1,105,735	691,350	414,385	51,621	22,685
Minnesota.....	215,148	197,910	61,684	136,226	15,830	436
Iowa.....	225,010	216,323	139,112	77,211	7,309	1,316
Missouri.....	334,073	311,703	259,674	52,029	7,563	14,765
North Dakota.....	56,699	47,445	15,175	32,270	8,508	36
South Dakota.....	58,642	53,258	24,349	28,909	3,563	61
Nebraska.....	124,518	118,665	66,875	51,790	4,830	553
Kansas.....	170,503	160,431	124,481	35,950	4,018	5,518
South Atlantic.....	1,289,792	816,164	773,565	42,599	15,526	457,053
Delaware.....	19,460	15,357	12,536	2,821	873	3,228
Maryland.....	127,973	99,523	80,063	19,460	5,027	23,398
District of Columbia.....	28,112	18,644	15,018	3,626	820	8,620
Virginia.....	217,272	140,929	137,127	3,802	1,215	75,047
West Virginia.....	125,145	114,510	110,029	4,481	4,050	6,575
North Carolina.....	242,678	161,312	160,398	914	275	80,253
South Carolina.....	172,674	73,268	72,236	1,032	251	99,118
Georgia.....	280,383	149,781	147,305	2,476	665	129,923
Florida.....	76,095	42,840	38,853	3,987	2,350	30,891
East South Central.....	905,052	607,680	588,058	19,622	2,882	294,183
Kentucky.....	241,622	212,526	201,728	10,798	897	28,163
Tennessee.....	237,672	182,545	178,873	3,672	738	54,363
Alabama.....	229,517	129,474	126,039	3,435	806	99,130
Mississippi.....	196,241	83,135	81,418	1,717	441	112,527
West South Central.....	946,787	699,129	631,061	68,068	19,673	219,480
Arkansas.....	173,888	122,925	118,910	4,015	593	50,309
Louisiana.....	175,227	95,936	86,829	9,107	2,315	76,868
Oklahoma.....	174,402	149,850	139,613	10,237	1,353	14,974
Texas.....	423,270	330,418	285,709	44,709	15,412	77,329
Mountain.....	235,240	208,911	139,951	68,960	16,872	1,430
Montana.....	29,864	25,525	13,696	11,829	3,162	104
Idaho.....	30,270	28,612	20,084	8,528	1,273	33
Wyoming.....	11,488	10,221	6,972	3,249	1,016	97
Colorado.....	71,045	65,414	45,013	20,401	4,521	852
New Mexico.....	32,457	28,996	26,272	2,724	1,288	123
Arizona.....	17,389	11,231	6,876	4,355	2,778	136
Utah.....	37,464	34,876	18,587	16,289	2,169	70
Nevada.....	5,263	4,036	2,451	1,585	665	15
Pacific.....	356,430	315,716	193,954	121,762	30,103	2,144
Washington.....	99,647	89,471	54,227	35,244	8,302	325
Oregon.....	60,749	56,072	39,423	16,649	3,721	67
California.....	196,034	170,173	100,304	69,869	18,080	1,752

¹ Includes Indian, Chinese, Japanese, and all other.

TABLE 7.—BOYS UNDER 15 YEARS OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total.	WHITE.			Negro.	Indian, Chinese, Japanese, and all other.
		Native.		Foreign born.		
		Both parents native.	One or both parents for- eign born.			
United States.....	14,906,472	8,996,123	3,640,102	383,895	1,826,569	59,783
New England.....	895,752	354,115	477,650	55,780	7,828	379
Maine.....	102,110	65,432	31,951	4,453	146	128
New Hampshire.....	56,320	27,475	25,399	3,382	59	5
Vermont.....	49,775	34,310	13,391	1,951	119	4
Massachusetts.....	457,420	149,654	273,232	29,872	4,511	151
Rhode Island.....	74,583	22,232	44,836	6,323	1,135	57
Connecticut.....	155,544	55,012	88,841	9,799	1,858	34
Middle Atlantic.....	2,815,669	1,391,511	1,214,217	162,008	46,594	1,339
New York.....	1,251,318	509,743	631,866	95,930	12,606	1,173
New Jersey.....	371,695	162,845	177,217	20,818	10,771	44
Pennsylvania.....	1,192,656	718,923	405,134	45,260	23,217	122
East North Central.....	2,724,249	1,733,017	879,127	74,296	34,194	3,615
Ohio.....	679,095	501,814	147,954	16,189	13,101	37
Indiana.....	403,731	353,499	39,704	3,272	7,196	60
Illinois.....	840,451	474,729	323,108	30,819	11,710	85
Michigan.....	421,445	216,819	186,810	14,528	1,920	1,368
Wisconsin.....	379,527	186,156	181,551	9,488	267	2,065
West North Central.....	1,878,199	1,239,993	568,963	32,129	29,218	7,896
Minnesota.....	335,228	129,588	194,337	8,852	526	1,925
Iowa.....	347,712	247,276	94,478	3,996	1,898	64
Missouri.....	516,419	434,539	58,191	4,772	18,844	73
North Dakota.....	107,362	36,163	63,662	6,227	50	1,260
South Dakota.....	101,911	52,074	44,089	2,215	95	3,438
Nebraska.....	197,670	124,922	68,306	3,046	718	678
Kansas.....	271,897	215,431	45,900	3,021	7,087	458
South Atlantic.....	2,312,828	1,412,789	71,862	9,396	816,738	2,043
Delaware.....	29,537	19,275	4,820	444	4,996	2
Maryland.....	201,926	131,205	30,033	3,123	37,558	7
District of Columbia.....	38,218	21,857	5,300	573	10,459	29
Virginia.....	385,275	249,154	6,688	837	128,487	109
West Virginia.....	227,873	206,244	10,246	2,086	9,290	7
North Carolina.....	451,717	300,588	1,572	199	147,595	1,763
South Carolina.....	317,374	132,613	1,474	151	183,058	78
Georgia.....	525,235	279,788	3,665	432	241,321	29
Florida.....	135,673	72,065	8,064	1,551	53,974	19
East South Central.....	1,622,245	1,089,303	23,717	1,987	506,613	625
Kentucky.....	415,800	365,438	10,583	456	39,262	61
Tennessee.....	410,318	322,208	4,729	485	82,850	46
Alabama.....	429,819	244,481	5,694	652	178,769	223
Mississippi.....	366,308	157,176	2,711	394	205,732	296
West South Central.....	1,726,036	1,194,088	115,573	17,150	380,825	18,400
Arkansas.....	312,844	223,047	5,704	465	83,525	103
Louisiana.....	320,286	166,217	15,553	1,495	136,818	203
Oklahoma.....	328,552	267,456	15,919	969	26,266	17,942
Texas.....	764,354	537,368	78,397	14,221	134,216	152
Mountain.....	415,173	271,137	114,361	12,217	1,947	15,511
Montana.....	51,652	25,978	21,655	1,814	147	2,058
Idaho.....	55,296	40,976	12,948	741	48	583
Wyoming.....	19,940	12,994	5,894	619	136	297
Colorado.....	115,275	76,613	33,572	3,635	1,106	349
New Mexico.....	60,950	49,748	5,475	1,144	173	4,410
Arizona.....	33,188	14,348	9,664	2,610	227	6,339
Utah.....	70,166	45,457	22,531	1,455	85	638
Nevada.....	8,706	5,023	2,622	199	25	837
Pacific.....	516,321	310,170	174,632	18,932	2,612	9,975
Washington.....	153,039	90,718	53,698	5,690	400	2,533
Oregon.....	87,897	62,923	21,716	2,017	92	1,149
California.....	275,885	156,529	99,218	11,225	2,120	6,293

TABLE 8.—BOYS UNDER 1 YEAR OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total.	WHITE.			Negro.	Indian, Chinese, Japanese, and all other.
		Native.		Foreign born.		
		Both parents native.	One or both parents for- eign born.			
United States.....	1,123,409	696,200	293,515	3,527	125,459	4,708
New England.....	69,301	26,547	41,483	582	654	35
Maine.....	7,525	4,747	2,695	56	17	10
New Hampshire.....	4,185	2,037	2,096	48	4	.....
Vermont.....	3,607	2,471	1,103	24	9	.....
Massachusetts.....	35,813	11,542	23,561	318	378	14
Rhode Island.....	5,918	1,779	3,971	60	101	7
Connecticut.....	12,253	3,971	8,057	76	145	4
Middle Atlantic.....	221,745	103,439	112,873	1,298	4,027	108
New York.....	97,245	37,670	57,629	669	1,177	100
New Jersey.....	28,467	11,672	15,727	182	886	.....
Pennsylvania.....	96,033	54,097	39,517	447	1,904	8
East North Central.....	199,275	131,160	64,805	620	2,419	271
Ohio.....	49,903	36,552	12,330	120	898	3
Indiana.....	28,345	25,076	2,749	28	490	2
Illinois.....	63,255	36,606	25,532	239	869	9
Michigan.....	31,418	17,776	13,225	150	140	127
Wisconsin.....	26,354	15,150	10,969	83	22	130
West North Central.....	136,023	96,943	36,370	303	1,806	601
Minnesota.....	23,250	10,882	12,119	85	37	127
Iowa.....	24,444	18,889	5,373	54	123	5
Missouri.....	37,380	32,384	3,815	35	1,139	7
North Dakota.....	8,765	3,486	5,128	45	4	102
South Dakota.....	7,871	4,682	2,881	19	8	281
Nebraska.....	14,747	10,402	4,219	27	47	52
Kansas.....	19,566	16,218	2,835	38	448	27
South Atlantic.....	175,899	111,990	5,916	106	57,676	211
Delaware.....	2,085	1,338	415	7	325	.....
Maryland.....	14,243	9,427	2,128	27	2,660	1
District of Columbia.....	2,732	1,593	400	4	732	3
Virginia.....	28,384	18,992	489	6	8,888	9
West Virginia.....	18,205	16,296	1,148	21	740	.....
North Carolina.....	36,700	25,068	126	2	11,316	188
South Carolina.....	23,942	10,867	90	1	12,977	7
Georgia.....	39,459	22,684	323	4	16,449	2
Florida.....	10,149	5,725	800	34	3,589	1
East South Central.....	121,441	85,818	1,531	10	34,036	46
Kentucky.....	30,779	27,683	524	1	2,568	3
Tennessee.....	31,839	25,697	336	4	5,800	2
Alabama.....	32,438	19,941	450	3	12,017	27
Mississippi.....	26,385	12,497	221	2	13,651	14
West South Central.....	129,145	94,335	8,467	231	24,518	1,594
Arkansas.....	24,247	18,595	353	2	5,289	8
Louisiana.....	22,468	12,590	1,160	8	8,695	15
Oklahoma.....	25,224	20,957	984	3	1,718	1,562
Texas.....	57,206	42,193	5,970	218	8,816	9
Mountain.....	32,446	22,310	8,917	154	135	930
Montana.....	4,071	2,135	1,751	23	6	156
Idaho.....	4,293	3,412	828	6	5	42
Wyoming.....	1,618	1,046	539	8	4	21
Colorado.....	8,726	5,975	2,627	19	80	25
New Mexico.....	4,929	4,088	543	30	14	254
Arizona.....	2,586	1,212	971	50	17	336
Utah.....	5,484	3,985	1,435	13	6	45
Nevada.....	739	457	223	5	3	51
Pacific.....	38,134	23,658	13,153	223	188	912
Washington.....	11,234	6,984	3,909	65	31	245
Oregon.....	6,274	4,682	1,470	33	7	82
California.....	20,626	11,992	7,774	125	150	585

TABLE 9.—BOYS UNDER 5 YEARS OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total.	WHITE.			Negro.	Indian, Chinese, Japanese, and all other.
		Native.		Foreign born.		
		Both parents native.	One or both parents for- eign born.			
United States.....	5,380,596	3,326,237	1,350,473	51,940	629,320	22,626
New England.....	322,860	126,803	184,962	8,091	2,876	128
Maine.....	36,202	23,183	12,166	754	56	43
New Hampshire.....	19,665	9,587	9,496	561	19	2
Vermont.....	17,408	12,025	4,978	354	50	1
Massachusetts.....	166,075	54,800	106,338	4,220	1,665	52
Rhode Island.....	26,871	8,210	17,328	862	450	21
Connecticut.....	56,639	18,998	35,656	1,340	636	9
Middle Atlantic.....	1,035,009	501,887	496,047	19,225	17,384	466
New York.....	453,863	182,621	255,383	10,502	4,920	437
New Jersey.....	134,899	57,979	70,320	2,694	3,897	9
Pennsylvania.....	446,247	261,287	170,344	6,029	8,567	20
East North Central.....	966,876	635,899	307,630	10,565	11,566	1,216
Ohio.....	243,321	180,411	56,172	2,253	4,477	8
Indiana.....	140,091	123,937	13,291	495	2,351	17
Illinois.....	302,702	176,302	118,126	4,244	3,997	33
Michigan.....	151,252	83,697	64,101	2,323	650	481
Wisconsin.....	129,510	71,552	55,940	1,250	91	677
West North Central.....	663,945	464,744	182,596	4,345	9,447	2,813
Minnesota.....	114,822	51,332	61,570	1,092	186	642
Iowa.....	119,591	90,509	27,805	630	621	26
Missouri.....	182,523	157,230	18,567	613	6,088	25
North Dakota.....	41,724	15,773	24,790	700	17	444
South Dakota.....	37,167	21,278	14,279	312	30	1,268
Nebraska.....	71,148	48,991	21,199	475	244	239
Kansas.....	96,970	79,631	14,386	523	2,261	169
South Atlantic.....	837,884	524,072	27,597	1,317	284,101	797
Delaware.....	9,998	6,559	1,860	61	1,518	.....
Maryland.....	69,622	45,867	10,672	327	12,755	1
District of Columbia.....	13,401	7,843	1,893	74	3,581	10
Virginia.....	135,692	90,134	2,494	96	42,927	41
West Virginia.....	85,804	76,958	4,935	375	3,534	2
North Carolina.....	168,321	113,716	596	30	53,279	700
South Carolina.....	115,296	50,253	525	21	64,470	27
Georgia.....	190,765	105,763	1,313	53	83,625	11
Florida.....	48,985	26,979	3,309	280	18,412	5
East South Central.....	588,522	406,612	7,515	231	173,902	262
Kentucky.....	149,226	133,497	2,939	67	12,700	23
Tennessee.....	150,221	120,353	1,553	50	28,245	20
Alabama.....	157,382	93,375	2,014	83	61,808	102
Mississippi.....	131,693	59,387	1,009	31	71,149	117
West South Central.....	626,357	447,270	40,261	3,010	128,497	7,319
Arkansas.....	116,494	86,049	1,897	53	28,456	39
Louisiana.....	112,577	60,843	5,648	151	45,867	68
Oklahoma.....	122,854	101,357	5,166	146	9,028	7,157
Texas.....	274,432	199,021	27,550	2,660	45,146	55
Mountain.....	154,680	104,977	41,349	2,141	642	5,571
Montana.....	19,409	10,184	8,075	366	46	738
Idaho.....	20,544	15,990	4,180	142	19	213
Wyoming.....	7,775	5,204	2,316	94	55	106
Colorado.....	41,819	28,564	12,301	498	335	121
New Mexico.....	22,679	18,576	2,136	254	69	1,644
Arizona.....	12,571	5,652	4,076	533	80	2,230
Utah.....	26,577	18,789	7,298	213	28	249
Nevada.....	3,306	2,018	967	41	10	270
Pacific.....	184,463	113,973	62,516	3,015	905	4,054
Washington.....	55,432	33,915	19,366	955	139	1,057
Oregon.....	30,641	22,659	7,189	347	34	412
California.....	98,390	57,399	35,961	1,713	732	2,585

TABLE 10.—BOYS 5 TO 9 YEARS OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total.	WHITE.			Negro.	Indian, Chinese, Japanese, and all other.
		Native.		Foreign born.		
		Both parents native.	One or both parents for- eign born.			
United States.....	4,924,123	2,969,230	1,165,484	150,652	619,175	19,582
New England.....	292,357	114,773	154,342	20,621	2,518	103
Maine.....	33,475	21,205	10,548	1,650	34	38
New Hampshire.....	18,474	8,874	8,383	1,195	22	.....
Vermont.....	16,474	11,393	4,304	742	34	1
Massachusetts.....	148,656	47,940	88,196	11,030	1,454	36
Rhode Island.....	24,222	7,105	14,527	2,220	356	14
Connecticut.....	51,056	18,256	28,384	3,784	618	14
Middle Atlantic.....	914,673	456,258	379,504	63,395	15,074	442
New York.....	403,516	165,775	196,301	37,091	3,944	405
New Jersey.....	121,915	54,292	56,042	8,053	3,514	14
Pennsylvania.....	389,242	236,191	127,161	18,251	7,616	23
East North Central.....	896,195	571,758	281,380	30,603	11,251	1,203
Ohio.....	221,410	164,455	45,994	6,731	4,221	9
Indiana.....	134,437	117,881	12,713	1,391	2,435	17
Illinois.....	275,742	157,039	101,749	13,050	3,881	23
Michigan.....	139,447	71,181	61,575	5,599	630	462
Wisconsin.....	125,159	61,202	59,349	3,832	84	692
West North Central.....	621,746	409,097	187,541	12,701	9,850	2,557
Minnesota.....	111,643	42,751	64,584	3,494	162	652
Iowa.....	115,852	82,300	31,275	1,569	686	22
Missouri.....	170,439	143,948	18,137	2,042	6,288	24
North Dakota.....	35,172	11,533	20,959	2,250	16	414
South Dakota.....	33,954	16,921	15,020	872	34	1,107
Nebraska.....	64,928	40,607	22,568	1,267	264	222
Kansas.....	89,758	71,037	14,998	1,207	2,400	116
South Atlantic.....	767,779	464,943	22,934	3,828	275,410	664
Delaware.....	9,650	6,301	1,566	176	1,607	.....
Maryland.....	67,482	43,430	9,784	1,308	12,659	1
District of Columbia.....	12,666	7,237	1,692	237	3,494	6
Virginia.....	129,152	82,942	2,168	344	43,658	40
West Virginia.....	75,019	68,142	2,971	888	3,015	3
North Carolina.....	148,721	97,894	520	76	49,662	569
South Carolina.....	104,854	43,027	453	41	61,303	30
Georgia.....	174,463	92,032	1,163	174	81,086	8
Florida.....	46,072	23,938	2,617	584	18,926	7
East South Central.....	540,361	360,726	7,682	797	170,969	187
Kentucky.....	138,177	121,568	3,380	190	13,022	17
Tennessee.....	136,096	106,596	1,518	201	27,767	14
Alabama.....	143,412	80,827	1,925	264	60,331	65
Mississippi.....	122,676	51,735	859	142	69,849	91
West South Central.....	584,070	400,108	38,874	6,404	132,583	6,101
Arkansas.....	105,399	74,310	1,881	186	28,987	35
Louisiana.....	110,164	56,182	5,342	557	48,020	63
Oklahoma.....	110,608	89,633	5,418	376	9,223	5,958
Texas.....	257,899	179,983	26,233	5,285	46,353	45
Mountain.....	138,291	90,021	37,489	4,786	663	5,332
Montana.....	17,200	8,614	7,165	690	49	682
Idaho.....	18,219	13,465	4,262	264	15	213
Wyoming.....	6,635	4,251	1,963	278	47	96
Colorado.....	38,194	25,292	11,011	1,411	378	102
New Mexico.....	20,738	16,897	1,782	461	56	1,542
Arizona.....	11,191	4,797	3,075	1,018	82	2,219
Utah.....	23,277	15,049	7,395	584	29	220
Nevada.....	2,837	1,656	836	80	7	258
Pacific.....	168,651	101,546	55,738	7,517	857	2,993
Washington.....	50,645	30,014	17,428	2,273	124	806
Oregon.....	28,907	20,770	6,961	794	35	347
California.....	89,099	50,762	31,349	4,450	698	1,840

TABLE 11.—BOYS 10 TO 14 YEARS OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total.	WHITE.			Negro.	Indian, Chinese, Japanese, and all other.
		Native.		Foreign born.		
		Both parents native.	One or both parents for- eign born.			
United States.....	4,602,649	2,700,606	1,123,728	182,739	578,068	17,508
New England.....	290,535	112,539	138,346	27,068	2,434	148
Maine.....	32,433	21,044	9,237	2,049	56	47
New Hampshire.....	18,181	9,014	7,520	1,626	18	3
Vermont.....	15,893	10,892	4,109	855	35	2
Massachusetts.....	142,689	46,914	79,698	14,622	1,392	63
Rhode Island.....	23,490	6,917	12,981	3,241	329	22
Connecticut.....	47,849	17,758	24,801	4,675	604	11
Middle Atlantic.....	865,987	433,366	338,666	79,388	14,136	431
New York.....	393,939	161,347	180,182	48,337	3,742	331
New Jersey.....	114,881	50,574	50,855	10,071	3,360	21
Pennsylvania.....	357,167	221,445	107,629	20,980	7,084	79
East North Central.....	861,178	525,360	290,117	33,128	11,377	1,196
Ohio.....	214,364	156,948	45,788	7,205	4,403	20
Indiana.....	129,203	111,681	13,700	1,386	2,410	26
Illinois.....	262,007	141,388	103,233	13,525	3,832	29
Michigan.....	130,746	61,941	61,134	6,606	640	425
Wisconsin.....	124,858	53,402	66,262	4,406	92	696
West North Central.....	592,508	366,152	198,826	15,063	9,921	2,526
Minnesota.....	108,763	35,505	68,183	4,266	178	631
Iowa.....	112,269	74,467	35,398	1,797	591	16
Missouri.....	163,457	133,361	21,487	2,117	6,468	24
North Dakota.....	30,466	8,857	17,913	3,277	17	402
South Dakota.....	30,790	13,875	14,790	1,031	31	1,063
Nebraska.....	61,594	35,324	24,539	1,304	210	217
Kansas.....	85,169	64,763	16,516	1,291	2,426	173
South Atlantic.....	707,165	423,774	21,331	4,251	257,227	582
Delaware.....	9,889	6,415	1,394	207	1,871	2
Maryland.....	65,122	41,908	9,577	1,488	12,144	5
District of Columbia.....	12,151	6,777	1,715	262	3,384	13
Virginia.....	120,431	76,078	2,026	397	41,902	28
West Virginia.....	67,050	61,144	2,340	823	2,741	2
North Carolina.....	134,675	88,978	456	93	44,654	494
South Carolina.....	97,224	39,333	496	89	57,285	21
Georgia.....	160,007	81,993	1,189	205	76,610	10
Florida.....	40,616	21,148	2,138	687	16,636	7
East South Central.....	493,362	321,965	8,520	959	161,742	176
Kentucky.....	128,397	110,373	4,264	199	13,540	21
Tennessee.....	124,001	95,259	1,658	234	26,838	12
Alabama.....	129,025	70,279	1,755	305	56,630	56
Mississippi.....	111,939	46,054	843	221	64,734	87
West South Central.....	515,609	346,710	36,438	7,736	119,745	4,980
Arkansas.....	90,951	62,688	1,926	226	26,082	29
Louisiana.....	97,545	49,192	4,563	787	42,931	72
Oklahoma.....	95,090	76,466	5,335	447	8,015	4,827
Texas.....	232,023	158,364	24,614	6,276	42,717	52
Mountain.....	122,202	76,139	35,523	5,290	642	4,606
Montana.....	15,043	7,180	6,415	758	52	638
Idaho.....	16,533	11,521	4,506	335	14	157
Wyoming.....	5,530	3,539	1,615	247	34	95
Colorado.....	35,262	22,757	10,260	1,726	393	126
New Mexico.....	17,533	14,275	1,557	429	48	1,224
Arizona.....	9,426	3,899	2,513	1,059	65	1,890
Utah.....	20,312	11,619	7,838	658	28	169
Nevada.....	2,563	1,349	819	78	8	309
Pacific.....	163,207	94,651	56,378	8,400	850	2,926
Washington.....	46,962	26,789	16,904	2,462	137	670
Oregon.....	28,349	19,494	7,566	876	23	390
California.....	87,896	48,368	31,908	5,062	690	1,866

TABLE 12.—BOYS 15 TO 19 YEARS
PARENTAGE,

TIVITY, AND

1904

32

34

TABLE 13.—GIRLS UNDER 15 YEARS OF AGE,
PARENTAGE,

ACTIVITY, AND

27

TABLE 14.—GIRLS UNDER 1 YEAR OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total.	WHITE.			Negro.	Indian, Chinese, Japanese, and all other.
		Native.		Foreign born.		
		Both parents native.	One or both parents for- eign born.			
United States.....	1,093,933	672,940	286,215	3,208	126,927	4,643
New England.....	67,926	25,860	40,804	570	657	35
Maine.....	7,485	4,742	2,652	67	11	13
New Hampshire.....	4,140	1,933	2,160	42	5	.....
Vermont.....	3,626	2,510	1,076	24	15	1
Massachusetts.....	34,921	11,182	23,036	295	391	17
Rhode Island.....	5,810	1,693	3,967	59	87	4
Connecticut.....	11,944	3,800	7,913	83	148	.....
Middle Atlantic.....	215,508	100,777	109,731	1,170	3,743	87
New York.....	94,308	36,591	55,904	609	1,123	81
New Jersey.....	27,731	11,389	15,355	140	843	4
Pennsylvania.....	93,469	52,797	38,472	421	1,777	2
East North Central.....	194,835	127,866	63,682	592	2,432	263
Ohio.....	48,873	35,690	12,097	123	959	4
Indiana.....	27,753	24,473	2,763	18	497	2
Illinois.....	61,904	35,803	25,032	241	819	9
Michigan.....	30,632	17,143	13,106	141	132	110
Wisconsin.....	25,673	14,757	10,684	69	25	138
West North Central.....	132,465	94,754	34,965	252	1,900	594
Minnesota.....	22,861	10,750	11,852	69	38	152
Iowa.....	23,746	18,409	5,168	31	128	10
Missouri.....	36,549	31,631	3,633	42	1,241	2
North Dakota.....	8,224	3,259	4,819	42	5	99
South Dakota.....	7,647	4,648	2,729	22	3	245
Nebraska.....	14,073	10,022	3,940	11	49	51
Kansas.....	19,365	16,035	2,824	35	436	35
South Atlantic.....	171,250	106,867	5,888	81	58,230	184
Delaware.....	2,095	1,327	443	4	321	.....
Maryland.....	13,621	8,926	2,030	14	2,650	1
District of Columbia.....	2,757	1,597	428	3	726	3
Virginia.....	27,784	18,239	511	4	9,013	17
West Virginia.....	17,524	15,493	1,274	25	731	1
North Carolina.....	35,905	24,092	130	2	11,536	145
South Carolina.....	23,463	10,410	84	5	12,957	7
Georgia.....	38,278	21,442	285	5	16,543	3
Florida.....	9,823	5,341	703	19	3,753	7
East South Central.....	118,688	82,747	1,469	15	34,419	38
Kentucky.....	30,327	27,189	521	4	2,608	5
Tennessee.....	30,564	24,343	312	2	5,906	1
Alabama.....	32,074	19,379	447	6	12,227	15
Mississippi.....	25,723	11,836	189	3	13,678	17
West South Central.....	125,308	89,805	8,474	226	25,213	1,590
Arkansas.....	23,399	17,486	385	4	5,515	9
Louisiana.....	22,101	12,116	1,232	5	8,740	8
Oklahoma.....	24,571	20,180	1,005	3	1,826	1,557
Texas.....	55,237	40,023	5,852	214	9,132	16
Mountain.....	31,283	21,481	8,557	132	142	971
Montana.....	3,831	2,065	1,598	21	15	132
Idaho.....	3,995	3,147	786	3	5	54
Wyoming.....	1,547	1,026	478	9	9	25
Colorado.....	8,398	5,637	2,653	23	69	16
New Mexico.....	4,960	4,126	501	24	17	292
Arizona.....	2,530	1,186	934	37	16	357
Utah.....	5,401	3,932	1,413	10	8	38
Nevada.....	621	362	194	5	3	57
Pacific.....	36,670	22,783	12,645	170	191	881
Washington.....	10,845	6,676	3,840	50	33	246
Oregon.....	6,115	4,541	1,466	22	9	77
California.....	19,710	11,566	7,339	98	149	558

TABLE 15.—GIRLS UNDER 5 YEARS OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total.	WHITE.			Negro.	Indian, Chinese, Japanese, and all other.
		Native.		Foreign born.		
		Both parents native.	One or both parents for- eign born.			
United States.....	5,250,768	3,220,045	1,323,652	50,567	633,968	22,536
New England.....	317,965	123,822	182,987	8,014	3,000	142
Maine.....	35,643	22,594	12,175	765	61	48
New Hampshire.....	19,916	9,522	9,811	561	21	1
Vermont.....	16,763	11,632	4,708	368	52	3
Massachusetts.....	162,811	53,205	103,527	4,237	1,783	59
Rhode Island.....	27,227	8,137	17,812	842	412	24
Connecticut.....	55,605	18,732	34,954	1,241	671	7
Middle Atlantic.....	1,015,130	490,560	487,400	18,782	17,914	474
New York.....	445,064	178,779	250,369	10,343	5,141	432
New Jersey.....	132,043	56,437	68,899	2,666	4,025	16
Pennsylvania.....	438,023	255,344	168,132	5,773	8,748	26
East North Central.....	940,837	616,352	301,076	10,333	11,862	1,214
Ohio.....	236,154	174,611	54,896	2,200	4,444	13
Indiana.....	135,433	119,501	13,018	490	2,412	12
Illinois.....	295,287	171,227	115,605	4,173	4,251	31
Michigan.....	147,302	81,045	62,909	2,263	635	450
Wisconsin.....	126,661	69,968	54,658	1,207	120	708
West North Central.....	646,964	452,484	177,682	4,238	9,680	2,880
Minnesota.....	112,018	49,989	60,131	1,051	196	651
Iowa.....	116,472	88,335	26,899	577	624	37
Missouri.....	177,980	152,877	18,228	644	6,211	20
North Dakota.....	40,675	15,337	24,117	697	20	504
South Dakota.....	36,322	20,744	13,950	297	30	1,301
Nebraska.....	68,948	47,677	20,392	408	233	238
Kansas.....	94,549	77,525	13,965	564	2,366	129
South Atlantic.....	819,335	503,740	27,089	1,258	286,415	833
Delaware.....	10,047	6,479	1,943	54	1,571	.....
Maryland.....	68,092	44,182	10,393	283	13,232	2
District of Columbia.....	13,268	7,633	1,853	65	3,709	9
Virginia.....	133,133	86,831	2,490	136	43,628	48
West Virginia.....	83,314	74,627	4,881	364	3,440	2
North Carolina.....	164,471	109,153	563	30	54,018	707
South Carolina.....	113,163	48,371	490	25	64,242	35
Georgia.....	185,876	100,656	1,294	38	83,873	15
Florida.....	47,971	25,808	3,182	263	18,702	16
East South Central.....	571,949	390,085	7,533	195	173,901	235
Kentucky.....	145,277	129,430	2,939	46	12,841	21
Tennessee.....	144,370	114,439	1,534	49	28,335	13
Alabama.....	154,334	89,878	2,113	68	62,183	92
Mississippi.....	127,968	56,338	947	32	70,542	109
West South Central.....	609,301	430,368	39,415	2,899	129,515	7,104
Arkansas.....	114,207	83,342	1,903	54	28,874	34
Louisiana.....	111,492	58,969	5,705	175	46,572	71
Oklahoma.....	119,050	97,785	5,035	134	9,158	6,938
Texas.....	264,552	190,272	26,772	2,536	44,911	61
Mountain.....	151,124	102,489	40,181	2,085	708	5,661
Montana.....	18,914	9,983	7,766	380	59	726
Idaho.....	19,900	15,571	3,969	111	21	228
Wyoming.....	7,556	5,014	2,269	112	54	107
Colorado.....	40,743	27,628	12,130	480	373	132
New Mexico.....	22,606	18,443	2,105	240	81	1,737
Arizona.....	12,207	5,478	3,910	523	76	2,220
Utah.....	26,121	18,535	7,103	212	28	243
Nevada.....	3,077	1,837	929	27	16	268
Pacific.....	178,163	110,145	60,289	2,763	973	3,993
Washington.....	53,324	32,798	18,420	871	150	1,065
Oregon.....	29,570	21,925	6,896	311	36	402
California.....	95,269	55,422	34,973	1,581	787	2,506

TABLE 16.—GIRLS 5 TO 9 YEARS (

NATIVITY, AND
1910.

1910

1910

TABLE 17.—GIRLS 10 TO 14 YEARS OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total.	WHITE.			Negro.	Indian, Chinese, Japanese, and all other.
		Native.		Foreign born.		
		Both parents native.	One or both parents for- eign born.			
United States.....	4,505,387	2,623,627	1,111,650	177,027	577,192	15,891
New England.....	279,021	110,384	138,759	27,113	2,658	107
Maine.....	32,155	20,549	9,395	2,113	61	37
New Hampshire.....	18,090	8,730	7,659	1,678	22	1
Vermont.....	15,558	10,604	4,077	840	37	.....
Massachusetts.....	142,271	46,441	79,644	14,627	1,513	46
Rhode Island.....	23,524	6,736	13,183	3,201	385	19
Connecticut.....	47,423	17,324	24,801	4,654	640	4
Middle Atlantic.....	860,099	428,944	336,673	78,506	15,512	464
New York.....	391,887	159,910	179,430	47,982	4,188	377
New Jersey.....	113,814	50,133	50,335	9,814	3,518	14
Pennsylvania.....	354,398	218,901	106,908	20,710	7,806	73
East North Central.....	845,581	513,808	286,662	32,199	11,807	1,105
Ohio.....	211,238	153,367	46,065	7,234	4,561	11
Indiana.....	126,365	108,912	13,634	1,222	2,574	23
Illinois.....	258,948	139,369	102,495	13,129	3,936	19
Michigan.....	127,734	60,524	59,678	6,491	636	405
Wisconsin.....	121,296	51,636	64,790	4,123	100	647
West North Central.....	578,166	356,702	194,621	14,147	10,360	2,336
Minnesota.....	105,639	34,474	66,366	4,073	197	529
Iowa.....	110,308	73,113	34,984	1,571	624	16
Missouri.....	160,734	130,525	21,342	2,124	6,722	21
North Dakota.....	28,926	8,313	17,277	2,889	13	434
South Dakota.....	29,231	12,937	14,293	1,013	31	957
Nebraska.....	60,188	34,366	24,065	1,310	228	219
Kansas.....	83,140	62,974	16,294	1,167	2,545	160
South Atlantic.....	688,893	406,815	21,511	4,008	256,012	547
Delaware.....	9,419	6,162	1,396	192	1,669	.....
Maryland.....	64,483	40,763	9,752	1,509	12,451	8
District of Columbia.....	12,498	6,701	1,700	263	3,827	7
Virginia.....	117,132	73,315	1,911	381	41,493	32
West Virginia.....	63,977	58,301	2,323	667	2,683	3
North Carolina.....	131,289	85,417	534	109	44,762	467
South Carolina.....	95,182	37,547	503	56	57,056	20
Georgia.....	155,210	78,359	1,238	188	75,419	6
Florida.....	39,703	20,250	2,154	643	16,652	4
East South Central.....	475,981	307,719	8,505	853	158,734	170
Kentucky.....	124,508	106,590	4,249	209	13,444	16
Tennessee.....	119,327	90,911	1,665	226	26,506	19
Alabama.....	124,171	66,595	1,749	273	55,499	55
Mississippi.....	107,975	43,623	842	145	63,285	80
West South Central.....	500,922	332,932	35,364	7,280	120,520	4,826
Arkansas.....	88,928	60,298	1,843	162	26,597	28
Louisiana.....	96,246	47,831	4,552	810	42,986	67
Oklahoma.....	90,979	72,519	5,157	419	8,193	4,601
Texas.....	224,769	152,284	23,812	5,889	42,744	40
Mountain.....	117,408	73,710	34,293	4,762	644	3,999
Montana.....	14,643	7,011	6,340	674	43	575
Idaho.....	15,369	10,802	4,179	247	5	136
Wyoming.....	5,299	3,403	1,595	196	22	83
Colorado.....	34,426	22,266	10,125	1,525	414	96
New Mexico.....	16,875	13,915	1,394	408	58	1,100
Arizona.....	8,665	3,685	2,270	1,014	65	1,631
Utah.....	19,758	11,337	7,603	647	27	144
Nevada.....	2,373	1,291	787	51	10	234
Pacific.....	159,316	92,613	55,262	8,159	945	2,237
Washington.....	45,840	26,279	16,339	2,475	137	619
Oregon.....	27,427	18,769	7,482	775	31	379
California.....	86,049	47,565	31,441	4,909	777	1,237

TABLE 18.—GIRLS 15 TO 19 YEARS OF AGE, BY RACE, NATIVITY, AND PARENTAGE, FOR STATES: CENSUS OF 1910.

STATE.	Total.	WHITE.			Negro.	Indian, Chinese, Japanese, and all other.
		Native.		Foreign born.		
		Both parents native.	One or both parents for- eign born.			
United States.....	4,536,321	2,536,527	1,110,714	322,007	552,471	14,602
New England.....	293,653	109,958	122,692	58,093	2,805	105
Maine.....	32,362	20,423	8,036	3,765	80	58
New Hampshire.....	18,642	8,568	6,513	3,529	30	2
Vermont.....	15,039	10,020	3,796	1,188	35	.....
Massachusetts.....	150,931	46,533	70,273	32,560	1,539	26
Rhode Island.....	25,476	6,802	11,778	6,462	421	13
Connecticut.....	51,203	17,612	22,296	10,589	700	6
Middle Atlantic.....	912,371	425,391	313,599	154,784	17,948	649
New York.....	433,487	161,281	168,657	97,752	5,455	342
New Jersey.....	120,897	49,309	46,040	21,574	3,953	21
Pennsylvania.....	357,987	214,801	98,902	35,458	8,540	286
East North Central.....	875,379	500,986	306,761	53,444	13,265	923
Ohio.....	221,613	154,045	51,033	11,379	5,150	6
Indiana.....	128,006	107,694	15,714	1,751	2,828	19
Illinois.....	274,191	135,654	109,224	24,815	4,475	23
Michigan.....	131,391	57,928	62,852	9,536	694	381
Wisconsin.....	120,178	45,665	67,938	5,963	118	494
West North Central.....	585,329	343,214	206,800	21,553	11,607	2,155
Minnesota.....	106,832	30,740	68,511	6,901	215	465
Iowa.....	110,962	69,198	38,426	2,648	670	20
Missouri.....	167,591	130,145	26,396	3,453	7,578	19
North Dakota.....	27,043	7,204	15,871	3,618	21	329
South Dakota.....	28,303	11,802	14,144	1,468	36	853
Nebraska.....	61,330	33,016	25,821	1,975	303	215
Kansas.....	83,268	61,109	17,631	1,490	2,784	254
South Atlantic.....	654,262	387,068	21,540	6,218	238,938	498
Delaware.....	9,438	6,057	1,407	394	1,580	.....
Maryland.....	65,102	40,178	10,049	2,621	12,238	16
District of Columbia.....	14,880	7,760	1,831	384	4,903	2
Virginia.....	109,451	68,435	1,841	460	38,679	36
West Virginia.....	60,116	54,180	2,208	871	2,854	3
North Carolina.....	122,430	79,958	464	98	41,501	409
South Carolina.....	88,226	35,930	508	91	51,676	21
Georgia.....	145,664	74,963	1,233	260	69,200	8
Florida.....	38,955	19,607	1,999	1,039	16,307	3
East South Central.....	455,947	292,790	10,005	1,195	151,820	137
Kentucky.....	120,408	100,113	5,587	377	14,317	14
Tennessee.....	118,586	88,733	1,863	320	27,658	12
Alabama.....	117,199	63,362	1,676	315	51,787	59
Mississippi.....	99,754	40,582	879	183	58,058	52
West South Central.....	475,118	313,037	34,261	9,439	114,211	4,170
Arkansas.....	87,538	59,163	2,049	272	26,013	41
Louisiana.....	90,325	43,820	4,665	1,102	40,696	42
Oklahoma.....	85,335	68,199	5,007	553	7,526	4,050
Texas.....	211,920	141,855	22,540	7,512	39,976	37
Mountain.....	113,653	68,638	34,263	6,216	773	3,763
Montana.....	13,925	6,566	5,831	968	58	502
Idaho.....	14,319	9,704	4,092	349	20	154
Wyoming.....	5,024	3,086	1,569	261	51	57
Colorado.....	35,065	22,386	10,282	1,875	451	71
New Mexico.....	15,977	13,078	1,307	477	59	1,056
Arizona.....	8,387	3,344	2,195	1,235	83	1,530
Utah.....	18,620	9,324	8,194	926	42	134
Nevada.....	2,336	1,150	793	125	9	259
Pacific.....	170,609	95,445	60,793	11,065	1,104	2,202
Washington.....	47,622	26,409	17,444	3,049	167	553
Oregon.....	28,953	19,141	8,301	1,195	33	283
California.....	94,034	49,895	35,048	6,821	904	1,366

TABLE 19.—URBAN AND RURAL¹ CHILDREN UNDER 15 YEARS OF AGE,
BY RACE AND NATIVITY, FOR STATES: CENSUS OF 1910.

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¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.
² Includes Indian, Chinese, Japanese, and all other.

TABLE 90.—URBAN AND RURAL¹
BY RACE AND NATIVITY.UNDER 1 YEAR OF AGE,
CENSUS OF 1910.

WHITE		COLORED		CHINESE		JAPANESE		OTHER	
Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
22	22	22	22	22	22	22	22	22	22

¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.

² Includes Indian, Chinese, Japanese, and all other.

TABLE 21.—URBAN AND RURAL¹ CHILDREN UNDER 5 YEARS OF AGE,
BY RACE AND NATIVITY, OF 1910.

TABLE 21.—URBAN AND RURAL¹ CHILDREN UNDER 5 YEARS OF AGE,
BY RACE AND NATIVITY, OF 1910.

¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.
² Includes Indian, Chinese, Japanese, and all other.

**TABLE 22.—URBAN AND RURAL¹ CHILDREN 5 TO 9 YEARS OF AGE,
BY RACE AND NATIVITY, FOR STATES: CENSUS OF 1910.**

**TABLE 24.—URBAN AND RURAL¹ CHILDREN 15 TO 19 YEARS OF AGE,
BY RACE AND NATIVITY, FOR STATES: CENSUS OF 1910.**

¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.

² Includes Indian, Chinese, Japanese, and all other.

TABLE 25.—URBAN AND RURAL¹
BY SEX.

UNDER 15 YEARS OF AGE

SEX

TOTAL

¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.

TABLE 26.—URBAN AND RURAL¹ CHILDREN UNDER 1 YEAR OF AGE, BY SEX, FOR STATES: CENSUS OF 1910.

STATE.	TOTAL.		BOYS.		GIRLS.	
	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.
United States.....	888,783	1,328,559	449,838	673,571	438,945	654,988
New England.....	116,014	21,213	58,675	10,626	57,339	10,587
Maine.....	7,581	7,429	3,832	3,693	3,749	3,736
New Hampshire.....	5,177	3,148	2,573	1,612	2,604	1,536
Vermont.....	3,327	3,906	1,632	1,975	1,695	1,931
Massachusetts.....	66,496	4,238	33,722	2,091	32,774	2,147
Rhode Island.....	11,377	351	5,751	167	5,626	184
Connecticut.....	22,056	2,141	11,165	1,088	10,891	1,053
Middle Atlantic.....	309,850	127,403	157,144	64,601	152,706	62,802
New York.....	157,085	34,468	79,687	17,558	77,398	16,910
New Jersey.....	43,674	12,524	22,117	6,350	21,557	6,174
Pennsylvania.....	109,091	80,411	55,340	40,693	53,751	39,718
East North Central.....	198,883	195,227	100,325	98,950	98,558	96,277
Ohio.....	53,461	45,315	26,881	23,022	26,580	22,293
Indiana.....	21,624	34,474	10,946	17,399	10,678	17,075
Illinois.....	74,471	50,688	37,601	25,654	36,870	25,034
Michigan.....	28,385	33,665	14,275	17,143	14,110	16,522
Wisconsin.....	20,942	31,085	10,622	15,732	10,320	15,353
West North Central.....	71,614	196,874	36,118	99,905	35,496	96,969
Minnesota.....	16,329	29,782	8,253	14,997	8,076	14,785
Iowa.....	12,048	36,142	6,072	18,372	5,976	17,770
Missouri.....	25,003	48,926	12,597	24,783	12,406	24,143
North Dakota.....	1,384	15,605	717	8,048	667	7,557
South Dakota.....	1,565	13,953	796	7,075	769	6,878
Nebraska.....	5,984	22,836	3,004	11,743	2,980	11,093
Kansas.....	9,301	29,630	4,679	14,887	4,622	14,743
South Atlantic.....	64,221	282,928	32,446	143,453	31,775	139,475
Delaware.....	2,025	2,155	1,022	1,063	1,003	1,092
Maryland.....	12,287	15,577	6,233	8,010	6,054	7,567
District of Columbia.....	5,489	.....	2,732	.....	2,757	.....
Virginia.....	10,067	46,101	5,089	23,295	4,978	22,806
West Virginia.....	5,008	30,721	2,550	15,655	2,458	15,066
North Carolina.....	8,119	64,486	3,995	32,705	4,124	31,781
South Carolina.....	5,219	42,186	2,631	21,311	2,588	20,875
Georgia.....	11,394	66,343	5,823	33,636	5,571	32,707
Florida.....	4,613	15,359	2,371	7,778	2,242	7,581
East South Central.....	30,849	209,280	15,586	105,855	15,263	103,425
Kentucky.....	9,793	51,313	4,948	25,831	4,845	25,482
Tennessee.....	8,606	53,797	4,427	27,412	4,179	26,385
Alabama.....	8,106	56,406	4,031	28,407	4,075	27,999
Mississippi.....	4,344	47,764	2,180	24,205	2,164	23,559
West South Central.....	40,554	213,899	20,522	108,623	20,032	105,276
Arkansas.....	4,077	43,569	2,076	22,171	2,001	21,398
Louisiana.....	10,035	34,534	4,995	17,473	5,040	17,061
Oklahoma.....	6,806	42,989	3,422	21,802	3,384	21,187
Texas.....	19,636	92,807	10,029	47,177	9,607	45,630
Mountain.....	18,858	44,871	9,634	22,812	9,224	22,059
Montana.....	2,624	5,278	1,337	2,734	1,287	2,544
Idaho.....	1,325	6,963	672	3,621	653	3,342
Wyoming.....	764	2,401	373	1,245	391	1,156
Colorado.....	7,020	10,104	3,666	5,060	3,354	5,044
New Mexico.....	1,068	8,821	544	4,385	524	4,436
Arizona.....	1,456	3,660	727	1,859	729	1,801
Utah.....	4,401	6,484	2,204	3,280	2,197	3,204
Nevada.....	200	1,160	111	628	89	532
Pacific.....	37,940	36,864	19,888	18,746	18,552	18,118
Washington.....	10,141	11,938	5,116	6,118	5,025	5,820
Oregon.....	4,664	7,725	2,377	3,897	2,287	3,828
California.....	23,135	17,201	11,895	8,731	11,240	8,470

¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.

TABLE 27.—URBAN AND RURAL¹
BY SEX,

UNDER 5 YEARS OF AGE,

SEX	WHITE		COLORED	
	MALES	FEMALES	MALES	FEMALES
Urban	1,234,567	1,345,678	234,567	245,678
Rural	3,456,789	3,567,890	567,890	578,901
Total	4,691,356	4,913,568	802,457	824,579

¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.

TABLE 28.—URBAN AND RURAL¹ CHILDREN 5 TO 9 YEARS OF AGE, BY SEX, FOR STATES: CENSUS OF 1910.

STATE.	TOTAL.		BOYS.		GIRLS.	
	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.
United States.....	3, 773, 917	5, 986, 715	1, 891, 343	3, 032, 780	1, 882, 574	2, 953, 935
New England.....	482, 933	98, 009	242, 715	49, 642	240, 218	48, 367
Maine.....	33, 250	33, 383	16, 630	16, 845	16, 620	16, 538
New Hampshire.....	22, 248	14, 625	11, 058	7, 416	11, 190	7, 209
Vermont.....	15, 000	17, 657	7, 522	8, 952	7, 478	8, 705
Massachusetts.....	274, 330	20, 516	138, 240	10, 416	136, 090	10, 100
Rhode Island.....	46, 957	1, 490	23, 485	737	23, 472	753
Connecticut.....	91, 148	10, 338	45, 780	5, 276	45, 368	5, 062
Middle Atlantic.....	1, 253, 818	565, 420	628, 465	286, 208	625, 353	279, 212
New York.....	636, 906	166, 962	318, 941	84, 575	317, 965	82, 387
New Jersey.....	182, 520	59, 759	91, 504	30, 411	91, 016	29, 348
Pennsylvania.....	434, 392	338, 699	218, 020	171, 222	216, 372	167, 477
East North Central.....	841, 558	932, 401	422, 141	474, 054	419, 417	458, 347
Ohio.....	224, 120	214, 779	112, 326	109, 084	111, 794	105, 695
Indiana.....	98, 027	166, 920	49, 215	85, 222	48, 812	81, 698
Illinois.....	307, 654	239, 214	154, 652	121, 090	153, 002	118, 124
Michigan.....	117, 792	157, 575	58, 995	80, 452	58, 797	77, 123
Wisconsin.....	93, 965	153, 913	46, 953	78, 206	47, 012	75, 707
West North Central.....	322, 127	907, 574	161, 500	460, 246	160, 627	447, 328
Minnesota.....	70, 387	149, 846	35, 597	76, 046	34, 790	73, 800
Iowa.....	57, 175	171, 247	28, 648	87, 204	28, 527	84, 043
Missouri.....	113, 486	224, 746	56, 483	113, 956	57, 003	110, 790
North Dakota.....	5, 515	64, 412	2, 787	32, 385	2, 728	32, 027
South Dakota.....	6, 468	60, 465	3, 287	30, 667	3, 181	29, 798
Nebraska.....	26, 094	101, 992	13, 267	51, 661	12, 827	50, 331
Kansas.....	43, 002	134, 866	21, 431	68, 327	21, 571	66, 539
South Atlantic.....	288, 468	1, 236, 382	143, 761	624, 018	144, 707	612, 364
Delaware.....	8, 315	10, 882	4, 133	5, 517	4, 182	5, 365
Maryland.....	59, 160	74, 522	29, 470	37, 712	29, 690	36, 810
District of Columbia.....	25, 312	.....	12, 666	.....	12, 646	.....
Virginia.....	44, 114	212, 376	21, 786	107, 366	22, 328	105, 010
West Virginia.....	21, 348	126, 831	10, 672	64, 347	10, 676	62, 484
North Carolina.....	33, 705	261, 195	16, 738	131, 983	16, 967	129, 212
South Carolina.....	22, 695	186, 085	11, 192	93, 662	11, 503	92, 423
Georgia.....	52, 518	294, 851	26, 329	148, 134	26, 189	146, 717
Florida.....	21, 301	60, 640	10, 775	35, 297	10, 526	34, 343
East South Central.....	143, 762	927, 090	71, 339	469, 022	72, 423	458, 068
Kentucky.....	47, 256	225, 502	23, 524	114, 653	23, 732	110, 849
Tennessee.....	38, 664	230, 355	19, 132	116, 964	19, 532	113, 391
Alabama.....	36, 991	247, 811	18, 435	124, 977	18, 556	122, 834
Mississippi.....	20, 851	223, 422	10, 248	112, 428	10, 603	110, 994
West South Central.....	194, 689	960, 144	97, 465	486, 605	97, 224	473, 539
Arkansas.....	19, 600	190, 061	9, 821	95, 578	9, 779	94, 483
Louisiana.....	49, 522	169, 221	24, 634	85, 530	24, 888	83, 691
Oklahoma.....	31, 290	186, 485	15, 779	94, 820	15, 511	91, 656
Texas.....	94, 277	414, 377	47, 231	210, 668	47, 046	203, 709
Mountain.....	83, 643	189, 821	41, 957	96, 334	41, 686	93, 487
Montana.....	11, 080	23, 099	5, 511	11, 689	5, 569	11, 410
Idaho.....	5, 829	30, 303	2, 908	15, 311	2, 921	14, 992
Wyoming.....	3, 335	9, 714	1, 712	4, 923	1, 623	4, 791
Colorado.....	33, 091	42, 525	16, 567	21, 627	16, 524	20, 898
New Mexico.....	4, 961	36, 065	2, 469	18, 269	2, 492	17, 796
Arizona.....	5, 876	16, 041	2, 922	8, 269	2, 954	7, 772
Utah.....	18, 541	27, 334	9, 395	13, 882	9, 146	13, 452
Nevada.....	930	4, 740	473	2, 364	457	2, 376
Pacific.....	162, 919	169, 874	82, 000	86, 651	80, 919	83, 223
Washington.....	44, 377	55, 301	22, 432	28, 213	21, 945	27, 088
Oregon.....	20, 090	36, 833	10, 119	18, 788	9, 971	18, 045
California.....	98, 452	77, 740	49, 449	39, 650	49, 003	38, 090

¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.

TABLE 29.—URBAN AND RURAL¹ CHILDREN 10 TO 14 YEARS OF AGE, BY SEX, FOR STATES: CENSUS OF 1910.

STATE.	TOTAL.		BOYS.		GIRLS.	
	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.
United States.....	3,627,408	5,479,732	1,798,218	2,803,535	1,829,190	2,676,197
New England.....	464,354	95,202	231,526	49,009	232,828	46,193
Maine.....	32,410	32,178	16,045	16,388	16,365	15,790
New Hampshire.....	22,073	14,198	10,822	7,359	11,251	6,839
Vermont.....	14,405	17,046	7,109	8,784	7,296	8,262
Massachusetts.....	264,525	20,435	132,058	10,631	132,467	9,804
Rhode Island.....	45,545	1,469	22,710	780	22,835	689
Connecticut.....	85,396	9,876	42,782	5,067	42,614	4,809
Middle Atlantic.....	1,195,112	530,974	594,770	271,217	600,342	259,757
New York.....	620,249	165,577	309,370	84,569	310,879	81,008
New Jersey.....	171,243	57,452	85,231	29,650	86,012	27,802
Pennsylvania.....	403,620	307,945	200,169	156,998	203,451	150,947
East North Central.....	810,392	896,367	402,663	458,515	407,729	437,852
Ohio.....	215,826	209,776	106,897	107,467	108,929	102,309
Indiana.....	93,398	162,170	46,230	82,973	47,168	79,197
Illinois.....	296,477	224,478	147,416	114,591	149,061	109,887
Michigan.....	109,358	149,122	54,508	76,238	54,850	72,884
Wisconsin.....	95,333	150,821	47,612	77,246	47,721	73,575
West North Central.....	318,133	852,541	156,761	435,747	161,372	416,794
Minnesota.....	69,346	145,056	34,552	74,211	34,794	70,845
Iowa.....	57,070	165,507	27,953	84,316	29,117	81,191
Missouri.....	113,914	210,277	56,186	107,271	57,728	103,006
North Dakota.....	5,152	54,240	2,555	27,911	2,597	26,329
South Dakota.....	6,088	53,933	3,031	27,759	3,057	26,174
Nebraska.....	25,168	96,614	12,319	49,275	12,849	47,339
Kansas.....	41,395	126,914	20,165	65,004	21,230	61,910
South Atlantic.....	277,184	1,118,874	135,475	571,690	141,709	547,184
Delaware.....	8,050	11,258	3,921	5,968	4,129	5,290
Maryland.....	57,955	71,650	28,210	36,912	29,745	34,738
District of Columbia.....	24,649	.....	12,151	.....	12,498	.....
Virginia.....	42,732	194,831	20,991	99,440	21,741	95,391
West Virginia.....	19,732	111,295	9,940	57,110	9,792	54,185
North Carolina.....	31,795	234,169	15,341	119,334	16,454	114,835
South Carolina.....	22,564	169,842	10,975	86,249	11,589	83,593
Georgia.....	50,200	265,017	24,467	135,540	25,733	129,477
Florida.....	19,507	60,812	9,479	31,137	10,028	29,675
East South Central.....	140,297	829,046	68,361	425,001	71,936	404,045
Kentucky.....	48,719	204,186	23,800	104,597	24,919	99,589
Tennessee.....	37,887	205,441	18,377	105,624	19,510	99,817
Alabama.....	33,900	219,296	16,563	112,462	17,337	106,834
Mississippi.....	19,791	200,123	9,621	102,318	10,170	97,805
West South Central.....	181,580	834,951	89,184	426,425	92,396	408,526
Arkansas.....	17,657	162,222	8,565	82,386	9,092	79,836
Louisiana.....	48,230	145,561	23,617	73,928	24,613	71,633
Oklahoma.....	27,503	158,566	13,535	81,555	13,968	77,011
Texas.....	88,190	368,602	43,467	188,556	44,723	180,046
Mountain.....	78,053	161,557	38,749	83,453	39,304	78,104
Montana.....	10,076	19,610	4,893	10,150	5,183	9,460
Idaho.....	5,529	26,373	2,738	13,795	2,791	12,578
Wyoming.....	3,144	7,685	1,602	3,928	1,542	3,757
Colorado.....	32,050	37,638	15,805	19,457	16,245	18,181
New Mexico.....	4,436	29,972	2,172	15,361	2,264	14,611
Arizona.....	5,181	12,910	2,643	6,783	2,538	6,127
Utah.....	16,854	23,216	8,486	11,826	8,368	11,390
Nevada.....	783	4,153	410	2,153	373	2,000
Pacific.....	162,303	160,220	80,729	82,478	81,574	77,742
Washington.....	42,428	50,374	21,209	25,753	21,219	24,621
Oregon.....	20,259	35,517	10,113	18,236	10,146	17,281
California.....	99,616	74,329	49,407	38,489	50,209	35,840

¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.

TABLE 30.—URBAN AND RURAL¹
BY SEX, 1910.15 TO 19 YEARS OF AGE,
OF 1910.

1910

¹ All children living in cities or in incorporated places of 2,500 or more are classified as urban; children living in smaller places or in country districts are classified as rural.

TABLE 31.—NUMBER AND PERCENTAGE OF CHILDREN UNDER 15 YEARS OF AGE LIVING IN CITIES OF SPECIFIED SIZE, BY GEOGRAPHIC DIVISIONS: CENSUS OF 1910.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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TABLE 32.—NUMBER AND PERCENTAGE OF CHILDREN UNDER 5 YEARS OF AGE LIVING IN CITIES OF SPECIFIED SIZE, BY GEOGRAPHIC DIVISIONS: CENSUS OF 1910.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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TABLE 33.—NUMBER AND PERCENTAGE OF CHILDREN 5 TO 14 YEARS OF AGE LIVING IN CITIES OF SPECIFIED SIZE, BY GEOGRAPHIC DIVISIONS: CENSUS OF 1910.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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TABLE 34.—CHILDREN UNDER 15 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910.

CITY.	WHITE.			Negro.	BOYS.			GIRLS.				
	Total.	Foreign born.			Total.	White.		Total.	White.			
		Native.	Foreign born.			Native.	Foreign born.					
									Negro.	Negro.		
NEW ENGLAND.												
Maine:												
Lewiston.....	7,477	6,499	981	7	3,723	3,226	495	8	3,754	3,264	486	4
Portland.....	13,521	12,893	584	53	6,656	6,350	283	22	6,865	6,533	801	81
New Hampshire:												
Manchester.....	17,478	15,273	2,194	11	9,500	8,266	1,239	5	7,978	7,007	965	6
Nashua.....	9,093	8,084	1,007	2	5,568	4,865	702	1	3,525	3,219	305	1
Massachusetts:												
Boston.....	175,820	160,008	13,230	2,510	88,426	80,528	6,683	1,182	87,394	79,480	6,547	1,398
Brockton.....	14,555	13,651	741	163	7,310	6,875	355	80	7,245	6,776	386	53
Brookline town.....	5,362	5,229	119	14	2,661	2,597	57	7	2,701	2,632	62	7
Cambridge.....	29,165	26,151	1,702	1,308	14,700	13,235	821	642	14,465	12,916	881	665
Chelsea.....	9,662	8,153	1,440	67	4,857	4,092	736	28	4,805	4,061	704	89
Chicopee.....												
Chicopee.....	8,399	7,825	574	.....	4,196	3,904	292	.....	4,203	3,921	282	.....
Everett.....	9,730	8,979	495	256	4,963	4,592	234	130	4,767	4,380	261	126
Fall River.....	38,284	34,366	3,880	66	19,188	17,199	1,956	81	19,096	17,157	1,904	35
Fitchburg.....	11,067	10,229	833	5	5,517	5,121	394	2	5,550	5,108	439	3
Haverhill.....	11,254	10,637	522	95	5,696	5,371	280	45	5,558	5,266	242	50
Holyoke.....												
Holyoke.....	17,490	15,893	1,584	13	8,606	7,907	693	6	8,884	7,986	891	7
Lawrence.....	24,299	21,048	3,196	55	12,022	10,427	1,576	19	12,277	10,621	1,620	36
Lowell.....	28,464	25,965	2,473	24	14,201	12,973	1,217	10	14,263	12,992	1,256	14
Lynn.....	21,551	19,817	1,551	183	10,718	9,849	777	92	10,833	9,968	774	91
Malden.....	12,803	11,843	800	160	6,422	5,936	410	76	6,381	5,907	390	84
New Bedford.....												
New Bedford.....	27,860	23,179	3,858	820	13,891	11,583	1,915	392	13,969	11,596	1,943	428
Newton.....	10,109	9,605	392	110	5,070	4,828	182	58	5,039	4,777	210	52
Pittsfield.....	8,246	7,775	382	89	4,179	3,960	179	50	4,067	3,825	203	39
Quincy.....	9,748	9,024	712	10	4,827	4,462	360	4	4,921	4,562	352	6
Salem.....	12,639	11,770	837	29	6,303	5,893	392	18	6,336	5,877	445	11

TABLE 34.—CHILDREN UNDER 15 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

FEDERAL STATISTICS OF CHILDREN.

CITY.	Total.	WHITE.		Negro.	BOYS.			GIRLS.		
		Native.	Foreign born.		Total.	White.		Total.	Negro.	
						Native.	Foreign born.			
NEW ENGLAND—continued.										
Massachusetts—Continued.										
Somerville.....	20,320	19,458	802	59	10,230	9,783	417	29	10,060	30
Springfield.....	22,427	20,759	1,320	344	11,277	10,451	665	156	11,150	188
Taunton.....	9,437	8,783	550	104	4,718	4,416	251	51	4,719	53
Waltham.....	6,797	6,431	336	19	3,534	3,338	182	13	3,253	6
Worcester.....	39,468	36,680	2,485	298	19,852	18,429	1,284	135	19,616	163
Rhode Island:										
Newport.....	6,278	5,745	163	364	3,134	2,886	75	170	3,144	194
Pawtucket.....	14,398	13,167	1,155	69	7,280	6,667	583	28	7,118	41
Providence.....	58,826	52,770	4,781	1,213	29,296	26,246	2,419	599	29,531	614
Warwick town.....	8,082	7,324	712	42	3,924	3,559	345	17	4,158	26
Woonsocket.....	12,066	10,254	1,807	5	5,933	5,034	898	1	6,133	4
Connecticut:										
Bridgeport¹.....	27,766	25,379	2,081	299	13,859	12,655	1,059	143	13,907	156
Hartford¹.....	26,100	23,713	1,939	448	13,044	11,856	985	223	13,056	226
Meriden town.....	8,994	8,500	454	40	4,668	4,402	246	20	4,326	20
Meriden city.....	7,621	7,168	413	40	4,003	3,752	231	20	3,618	20
New Britain¹.....	13,289	12,285	978	26	6,699	6,168	522	9	6,590	17
New Haven¹.....	37,943	34,272	2,915	753	19,031	17,148	1,504	376	18,912	377
Norwich town.....	7,546	6,858	558	129	3,782	3,454	272	55	3,764	74
Stamford town.....	8,055	7,327	654	73	4,081	3,690	353	37	3,974	36
Stamford city.....	7,260	6,558	628	73	3,690	3,314	338	37	3,570	36
Waterbury¹.....	22,059	20,296	1,541	220	11,161	10,306	747	106	10,898	114
MIDDLE ATLANTIC.										
New York:										
Albany.....	22,507	21,541	785	177	11,337	10,861	392	82	11,170	95
Amsterdam.....	7,893	7,300	564	29	4,027	3,723	288	16	3,866	13
Auburn.....	7,653	7,256	294	103	3,848	3,655	146	47	3,805	56
Binghamton.....	10,370	9,908	358	100	5,226	5,010	167	48	5,144	52
Buffalo.....	119,706	113,414	5,994	286	59,708	56,550	3,009	142	59,998	144
Elmira.....	7,927	7,654	198	75	4,016	3,882	94	40	3,911	35

¹ Town and city coextensive.

Jamestown.....	7,680	7,124	532	24	3,883	3,583	285	15	3,797	3,541	247	9
Kington.....	6,549	6,221	145	183	3,229	3,070	72	87	3,320	3,151	73	96
Mount Vernon.....	8,739	8,062	400	186	4,433	4,109	234	89	4,306	3,953	255	97
New Rochelle.....	8,319	7,357	498	434	4,148	3,690	243	215	4,171	3,697	255	219
New York City.....	1,367,774	1,201,034	149,730	16,643	685,457	602,465	74,906	7,874	682,337	598,569	74,824	8,774
Newburgh.....	6,795	6,439	183	123	3,436	3,273	92	71	3,359	3,216	91	52
Niagara Falls.....	8,132	7,186	907	38	4,089	3,605	463	21	4,043	3,581	444	17
Poughkeepsie.....	6,507	6,172	194	141	3,306	3,153	85	63	3,201	3,014	109	78
Rochester.....	52,969	49,062	3,738	167	26,633	24,688	1,866	78	26,336	24,374	1,872	89
Schenectady.....	19,981	18,720	1,209	52	10,103	9,470	605	28	9,878	9,250	604	24
Syracuse.....	33,280	31,472	1,593	212	16,809	15,881	826	101	16,471	15,591	767	111
Troy.....	17,801	17,122	1,567	112	8,955	8,636	273	46	8,846	8,486	294	66
Utica.....	19,163	17,525	1,557	81	9,736	8,891	804	41	9,427	8,634	753	40
Watertown.....	6,332	5,855	463	14	3,145	2,921	217	7	3,187	2,984	246	7
Yonkers.....	24,007	22,400	1,262	342	12,105	11,294	633	176	11,902	11,106	629	166
New Jersey:												
Atlantic City.....	10,429	8,483	396	1,544	5,262	4,325	197	738	5,167	4,158	199	806
Bayonne.....	19,597	17,943	1,474	1,177	9,122	9,057	779	84	9,575	8,886	695	93
Camden.....	26,901	24,446	906	1,542	13,432	12,210	460	757	13,469	12,236	446	785
East Orange.....	7,923	7,298	160	465	3,965	3,662	73	230	3,958	3,636	87	235
Elizabeth.....	22,460	20,504	1,561	395	11,314	10,387	745	182	11,146	10,117	816	213
Hoboken.....	20,555	18,724	1,802	29	10,232	9,305	910	17	10,323	9,419	892	12
Jersey City.....	81,855	76,590	3,841	1,419	41,376	38,720	1,970	685	40,479	37,870	1,871	734
Newark.....	102,818	92,236	8,353	2,213	51,318	46,055	4,194	1,063	51,500	46,181	4,159	1,150
Orange.....	8,830	7,810	371	649	4,396	3,867	197	332	4,434	3,943	174	317
Passaic.....	17,059	14,743	2,193	123	8,555	7,436	1,059	60	8,504	7,307	1,134	63
Paterson.....	36,505	33,004	3,122	375	18,311	16,507	1,603	198	18,194	16,497	1,519	177
Perth Amboy.....	11,113	10,073	991	49	5,555	5,036	499	20	5,558	5,037	492	29
Trenton.....	26,823	24,584	1,788	451	13,430	12,315	903	212	13,393	12,269	885	239
West Hoboken town.....	10,907	9,901	988	16	5,444	4,966	473	4	5,463	4,935	515	12
Pennsylvania:												
Allentown.....	14,234	13,863	343	28	7,107	6,916	181	10	7,127	6,947	162	18
Altoona.....	15,233	14,779	353	101	7,495	7,278	172	45	7,738	7,501	181	56
Chester.....	10,323	8,773	346	1,204	5,094	4,375	175	544	5,229	4,398	171	660
Easton.....	7,023	6,747	206	70	3,532	3,386	106	40	3,491	3,361	100	30
Erle.....	19,655	18,820	774	61	9,814	9,402	384	28	9,841	9,418	390	33
Harrisburg.....	15,608	14,271	340	997	7,762	7,119	164	479	7,846	7,152	176	518
Hazleton.....	9,018	8,676	337	5	4,457	4,298	157	2	4,561	4,378	180	3
Johnstown.....	16,577	15,546	948	83	8,327	7,780	505	42	8,250	7,766	443	41
Lancaster.....	12,166	11,854	130	182	6,069	5,931	74	84	6,077	5,923	56	98
McKeesport.....	14,118	13,176	707	236	7,096	6,593	380	123	7,022	6,582	327	113

TABLE 34.—CHILDREN UNDER 15 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

CITY.	WHITE.			Negro.	BOYS.			GIRLS.				
	Total.	Foreign born.			Total.	White.		Total.	White.			
		Native.	Foreign born.			Native.	Foreign born.					
									Negro.	Negro.		
MIDDLE ATLANTIC—continued.												
Pennsylvania—Continued.												
New Castle.....	10,482	9,857	508	117	5,259	4,953	245	61	5,223	4,904	263	56
Norristown.....	6,532	5,993	251	288	3,280	2,964	131	135	3,302	3,029	120	153
Philadelphia.....	418,960	374,477	26,738	17,693	209,836	187,908	13,359	8,455	209,124	186,479	13,379	9,238
Pittsburgh.....	152,983	139,629	7,317	6,025	77,093	70,446	3,663	2,977	75,890	69,183	3,654	3,045
Reading.....	26,109	25,379	556	174	13,165	12,806	276	88	12,944	12,573	280	91
Scranton.....	41,609	39,535	1,945	125	20,713	19,675	973	68	20,896	19,860	972	62
Shenandoah.....	9,577	9,077	494	6	4,669	4,423	244	2	4,908	4,654	250	4
Wilkes-Barre.....	21,228	20,222	836	169	10,875	10,361	430	83	10,353	9,861	406	86
Williamsport.....	8,106	7,747	96	263	4,012	3,890	51	131	4,004	3,917	45	132
York.....	12,163	11,747	73	343	5,999	5,816	42	141	6,164	5,931	31	202
EAST NORTH CENTRAL.												
Ohio:												
Akron.....	17,151	16,199	786	163	8,583	8,139	361	80	8,568	8,060	425	83
Canton.....	12,615	12,119	437	59	6,201	5,951	216	34	6,414	6,168	221	25
Cincinnati.....	84,997	79,242	2,360	3,391	42,668	39,792	1,186	1,659	42,359	39,450	1,174	1,783
Cleveland.....	159,993	145,356	13,162	1,457	80,389	73,055	6,565	711	79,654	72,301	6,597	7,746
Columbus.....	41,271	38,103	743	2,414	20,665	19,129	374	1,155	20,606	18,974	389	1,259
Dayton.....	28,590	26,887	711	990	14,323	13,476	346	499	14,267	13,411	365	491
Hamilton.....	9,753	9,474	111	166	4,832	4,699	59	74	4,921	4,775	52	92
Lima.....	8,241	7,918	77	246	4,148	3,973	37	138	4,068	3,945	40	108
Lorain.....	9,196	8,189	903	104	4,552	4,071	435	46	4,644	4,118	468	58
Newark.....	6,248	6,099	76	73	3,172	3,100	39	33	3,076	2,999	37	40
Springfield.....	11,491	10,258	55	1,177	5,809	5,190	28	598	5,682	5,068	39	584
Toledo.....	44,905	43,027	1,541	331	22,562	21,644	765	147	22,343	21,383	776	184
Youngstown.....	21,951	20,027	1,490	483	10,977	10,030	737	210	10,974	9,997	783	239
Zanesville.....	6,709	6,366	46	357	3,353	3,149	29	175	3,416	3,217	17	182
Indiana:												
Evansville.....	17,804	16,365	48	1,391	8,879	8,164	31	664	8,926	8,161	17	727

Fert Wayne.....	16,384	16,082	226	112	8,121	7,922	136	62	8,203	8,110	100	50
Indianapolis.....	54,343	49,125	611	4,603	27,179	24,581	315	2,282	27,164	24,544	206	2,321
South Bend.....	15,834	14,638	1,039	136	7,885	7,287	520	64	7,949	7,351	519	72
Terre Haute.....	14,975	14,260	122	593	7,522	7,169	70	283	7,453	7,091	52	310
Illinois:												
Aurora.....	7,490	7,184	235	71	3,713	3,581	108	24	3,777	3,603	127	47
Bloomington.....	6,049	5,749	97	203	2,974	2,836	45	93	3,075	2,913	52	110
Chicago.....	600,860	551,323	42,653	6,769	301,706	276,767	21,563	3,313	299,154	274,556	21,090	3,456
Danville.....	7,460	7,089	38	333	3,755	3,576	16	163	3,705	3,513	22	170
Decatur.....	8,032	7,719	142	171	4,018	3,867	62	89	4,014	3,852	80	82
East St. Louis.....	15,853	13,994	496	1,363	7,965	7,066	262	637	7,898	6,928	234	726
Elgin.....	5,975	5,769	171	35	3,027	2,925	80	22	2,945	2,844	91	13
Joliet.....	9,907	8,308	494	102	4,958	4,648	262	47	4,949	4,660	232	55
Peoria.....	15,586	15,043	243	300	7,789	7,509	128	152	7,797	7,534	115	148
Quincy.....	8,669	8,303	31	335	4,383	4,200	15	168	4,286	4,103	16	167
Rockford.....	11,292	10,677	585	30	5,660	5,349	297	14	5,632	5,328	288	16
Springfield.....	13,675	12,590	401	684	6,836	6,302	205	329	6,839	6,288	196	355
Michigan:												
Battle Creek.....	5,533	5,288	120	125	2,706	2,592	54	60	2,827	2,696	66	65
Bay City.....	14,047	13,552	460	33	7,162	6,924	227	11	6,885	6,628	233	22
Detroit.....	126,373	115,533	9,814	1,015	63,315	57,866	4,922	520	63,058	57,667	4,892	495
Flint.....	8,299	7,763	448	88	4,052	3,808	198	46	4,247	3,955	250	42
Grand Rapids.....	30,467	28,782	1,572	110	15,160	14,355	748	56	15,307	14,427	824	54
Jackson.....	7,165	6,953	159	53	3,542	3,439	84	19	3,623	3,514	75	34
Kalamazoo.....	9,118	8,467	509	142	4,556	4,238	241	77	4,562	4,229	268	65
Lansing.....	7,097	6,845	164	88	3,729	3,585	94	50	3,368	3,260	70	38
Saginaw.....	13,187	12,639	498	49	6,654	6,378	249	27	6,533	6,261	249	22
Wisconsin:												
Green Bay.....	8,158	8,032	85	11	4,017	3,944	53	5	4,141	4,088	32	6
La Crosse.....	8,205	8,092	97	16	4,066	4,016	45	5	4,139	4,076	52	11
Madison.....	6,193	5,982	169	38	3,042	2,942	81	17	3,151	3,040	88	21
Milwaukee.....	106,875	101,039	5,703	127	53,618	50,644	2,917	56	53,257	50,395	2,786	71
Oshkosh.....	9,569	9,222	317	28	4,815	4,641	158	14	4,754	4,581	159	14
Racine.....	10,442	9,755	668	19	5,282	4,930	346	6	5,160	4,825	322	13
Sheboygan.....	8,059	7,427	628	4	4,154	3,828	324	2	3,905	3,599	304	2
Superior.....	12,030	11,252	708	23	6,059	5,662	367	8	5,971	5,590	341	15
WEST NORTH CENTRAL.												
Minnesota:												
Duluth.....	20,567	19,208	1,296	58	10,348	9,680	639	24	10,219	9,526	657	34
Minneapolis.....	70,358	66,633	3,351	364	35,411	33,569	1,659	178	34,947	33,064	1,692	186
St. Paul.....	53,510	50,789	2,263	453	27,004	25,638	1,141	223	26,506	25,151	1,122	230

CITY.	Total	WHITE.		Negro.	BOYS.			GIRLS.				
		Native.	Foreign born.		Total.	White.		Total.	White.		Negro.	
						Native.	Foreign born.		Native.	Foreign born.		
WEST NORTH CENTRAL—continued.												
Iowa:												
Cedar Rapids.....	8,172	7,658	270	44	4,042	3,876	142	24	4,130	3,982	128	20
Clinton.....	6,465	6,232	77	156	3,240	3,109	40	91	3,225	3,123	37	65
Council Bluffs.....	7,972	7,791	134	47	4,008	3,915	69	24	3,964	3,876	65	23
Davenport.....	10,797	10,505	161	128	5,526	5,363	91	72	5,271	5,142	70	56
Des Moines.....	22,085	20,942	481	661	11,067	10,493	261	312	11,018	10,449	220	349
Dubuque.....	9,744	9,630	93	21	4,866	4,815	41	10	4,878	4,815	52	11
Sioux City.....	11,776	11,232	477	66	5,881	5,600	252	29	5,895	5,632	225	37
Waterloo.....	6,743	6,650	93	.....	3,284	3,231	53	.....	3,459	3,419	40	.....
Missouri:												
Joplin.....	9,332	9,152	22	158	4,580	4,494	11	75	4,752	4,658	11	83
Kansas City.....	52,736	47,749	1,290	3,677	26,376	23,930	657	1,778	26,360	23,819	633	1,899
St. Joseph.....	18,707	17,582	363	805	9,236	8,691	181	408	9,471	8,891	182	397
St. Louis.....	170,983	156,482	6,497	7,953	85,265	78,168	3,219	3,850	85,718	78,314	3,278	4,103
Springfield.....	9,707	9,180	7	517	4,781	4,505	3	272	4,926	4,675	4	245
Nebraska:												
Lincoln.....	11,047	10,117	798	131	5,531	5,058	396	76	5,516	5,069	402	55
Omaha.....	29,294	27,335	1,269	684	14,657	13,691	627	335	14,637	13,644	642	349
South Omaha.....	8,399	7,758	484	157	4,220	3,880	256	84	4,179	3,878	228	73
Kansas:												
Kansas City.....	23,024	20,315	454	2,242	11,345	10,032	233	1,073	11,679	10,283	221	1,169
Topeka.....	10,455	9,114	229	1,112	5,242	4,599	108	535	5,213	4,515	121	577
Wichita.....	12,643	11,928	116	598	6,206	5,843	60	302	6,437	6,086	56	296
SOUTH ATLANTIC.												
Delaware:												
Wilmington.....	23,322	20,582	671	2,068	11,513	10,179	334	1,000	11,809	10,403	337	1,068
Maryland:												
Baltimore.....	150,110	125,735	5,150	19,195	74,492	62,819	2,597	9,072	76,618	62,936	2,853	10,122

District of Columbia: Washington ¹	76,630	53,767	1,121	21,603	38,218	27,157	573	10,459	38,412	26,610	548	11,284
Virginia:												
Lynchburg.....	8,422	5,803	18	2,599	4,182	2,878	5	1,297	4,240	2,925	13	1,302
Norfolk.....	17,433	11,327	281	5,819	8,572	5,645	131	2,793	8,861	5,682	150	3,026
Portsmouth.....	9,200	5,984	67	3,149	4,674	3,106	36	1,532	4,526	2,878	31	1,617
Richmond.....	33,420	21,427	248	11,745	16,505	10,703	108	5,694	16,915	10,724	140	6,051
Roanoke.....	10,570	8,214	44	2,312	5,276	4,132	27	1,117	5,294	4,082	17	1,195
West Virginia:												
Huntington.....	9,370	8,833	20	517	4,756	4,482	8	266	4,614	4,351	12	251
Wheeling.....	10,915	10,556	162	197	5,505	5,314	92	99	5,410	5,242	70	98
North Carolina:												
Charlotte.....	10,683	7,082	36	3,565	5,277	3,534	18	1,725	5,406	3,548	18	1,840
Wilmington.....	7,572	3,958	11	3,603	3,782	1,965	8	1,809	3,790	1,993	3	1,794
South Carolina:												
Charleston.....	16,422	7,462	74	8,886	8,076	3,803	41	4,232	8,346	3,659	33	4,654
Columbia.....	7,170	4,006	40	3,124	3,556	2,021	23	1,512	3,614	1,985	17	1,612
Georgia:												
Atlanta.....	42,575	28,735	321	13,513	21,382	14,593	168	6,619	21,193	14,142	153	6,894
Augusta.....	10,368	6,022	27	4,316	5,098	2,991	15	2,091	5,270	3,031	12	2,225
Macon.....	11,386	6,477	48	4,861	5,564	3,199	18	2,347	5,822	3,278	30	2,514
Savannah.....	17,176	8,930	175	8,068	8,264	4,410	103	3,749	8,912	4,520	72	4,319
Florida:												
Jacksonville.....	13,679	6,732	114	6,823	6,839	3,386	64	3,384	6,840	3,346	50	3,439
Tampa.....	11,549	8,058	1,270	2,218	5,730	4,002	659	1,068	5,819	4,056	611	1,150
Kentucky:												
Covington.....	14,036	13,426	29	581	6,890	6,573	17	300	7,146	6,853	12	281
Lexington.....	7,771	5,468	28	2,271	3,942	2,780	14	1,145	3,829	2,688	14	1,126
Louisville.....	56,266	47,983	436	7,897	27,953	23,923	200	3,830	28,313	24,010	236	4,067
Newport.....	7,970	7,700	132	138	4,066	3,926	77	63	3,904	3,774	55	75
Tennessee:												
Chattanooga.....	11,091	6,716	98	4,277	5,562	3,409	42	2,111	5,529	3,307	56	2,166
Knoxville.....	9,438	7,712	37	1,689	4,658	3,813	17	828	4,780	3,899	20	861
Memphis.....	30,261	18,986	346	10,919	14,910	9,469	191	5,247	15,351	9,517	155	5,672
Nashville.....	29,799	20,810	155	8,833	14,830	10,457	77	4,296	14,969	10,353	78	4,537
Alabama:												
Birmingham.....	38,526	24,603	416	13,507	19,279	12,488	221	6,570	19,247	12,115	195	6,937
Mobile.....	13,764	7,961	99	5,704	6,699	3,944	37	2,718	7,065	4,017	62	2,986
Montgomery.....	10,102	5,132	36	4,932	4,948	2,626	15	2,305	5,154	2,506	21	2,627

¹ Population is for the District of Columbia, with which the city is coextensive.

TABLE 34.—CHILDREN UNDER 15 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

FEDERAL STATISTICS OF CHILDREN.

CITY.	Total.	WHITE.		Negro.	BOYS.			GIRLS.			
		Native.	Foreign born.		Total.	White.		Total.	White.		
						Native.	Foreign born.		Native.	Foreign born.	
WEST SOUTH CENTRAL.											
Arkansas:	11,401	8,091	40	3,266	5,674	4,073	19	1,580	4,018	21	1,686
Little Rock.....											
Louisiana:	96,123	71,694	1,224	23,178	47,619	35,807	541	11,254	35,887	683	11,924
New Orleans.....	7,511	3,644	52	3,815	3,748	1,845	28	1,875	1,799	24	1,940
Shreveport.....											
Oklahoma:	6,565	4,215	9	2,217	3,262	2,114	6	1,077	2,101	3	1,140
Muskogee.....	15,027	13,366	75	1,570	7,438	6,630	35	766	6,736	40	804
Oklahoma City.....											
Texas:	8,174	5,902	72	2,196	4,051	2,975	37	1,036	2,927	35	1,160
Austin.....	23,369	19,174	249	3,940	11,575	9,511	124	1,936	9,653	126	2,004
Dallas.....	12,145	9,045	2,766	328	6,018	4,511	1,340	162	4,534	1,426	166
El Paso.....	19,738	16,266	217	3,255	9,825	8,123	125	1,577	8,143	92	1,678
Fort Worth.....											
Galveston.....	9,531	7,522	284	1,725	4,765	3,781	138	846	3,741	146	879
Houston.....	19,948	13,893	316	5,731	9,957	6,968	163	2,818	6,925	153	2,913
San Antonio.....	28,658	23,813	2,036	2,799	14,491	12,067	1,035	1,383	11,746	1,001	1,416
Waco.....	7,895	6,173	73	1,646	3,915	3,065	35	812	3,108	38	834
MOUNTAIN.											
Montana:	9,341	8,943	341	33	4,635	4,449	157	18	4,494	184	15
Butte.....											
Colorado:	6,759	6,395	93	268	3,372	3,196	42	131	3,387	51	157
Colorado Springs.....	49,383	46,658	1,726	945	24,705	23,361	871	449	23,297	855	466
Denver.....	11,571	10,860	397	310	5,845	5,507	197	140	5,353	200	170
Pueblo.....											
Utah:	8,201	7,885	271	24	4,124	3,971	135	12	3,914	136	12
Ogden.....	27,427	26,302	1,013	90	13,796	13,224	512	45	13,078	501	45
Salt Lake City.....											

PACIFIC.													
Washington:													
Seattle.....	46,657	43,321	2,582	264	23,436	21,731	1,308	138	23,221	21,590	1,274	126	
Spokane.....	24,170	23,080	970	101	12,125	11,599	475	52	12,085	11,481	495	49	
Tacoma.....	19,779	18,481	1,086	117	9,904	9,237	508	49	9,875	9,244	518	68	
Oregon:													
Portland.....	39,009	36,477	2,121	119	19,637	18,363	1,067	58	19,373	18,124	1,054	61	
California:													
Los Angeles.....	64,334	58,631	3,561	1,608	32,133	29,299	1,781	761	32,201	29,332	1,780	847	
Oakland.....	33,728	31,103	1,444	530	16,842	15,517	1,722	257	16,886	15,586	1,722	273	
San Francisco.....	78,908	73,115	4,121	227	39,767	36,720	2,122	114	39,141	36,395	1,990	113	
Berkeley.....	9,175	8,677	300	61	4,577	4,332	142	31	4,598	4,345	153	30	
Pasadena.....													
Sacramento.....	6,148	5,776	186	168	3,026	2,847	85	85	3,123	2,929	101	83	
San Diego.....	8,456	7,866	258	80	4,299	3,981	130	38	4,157	3,885	126	42	
San Jose.....	7,977	7,425	435	90	4,026	3,748	219	42	3,951	3,677	216	49	
	6,435	6,087	252	31	3,219	3,041	133	14	3,216	3,046	119	17	

FEDERAL STATISTICS OF CHILDREN.

TABLE 35.—CHILDREN UNDER 1 YEAR OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910.

CITY.	Total.	WHITE.		Negro.	BOYS.			GIRLS.		
		Native.	Foreign born.		Total.	White.		Total.	White.	
						Native.	Foreign born.		Native.	Foreign born.
NEW ENGLAND.										
Maine:										
Lewiston.....	567	551	14	2	269	263	4	2	288	10
Portland.....	1,028	1,023	3	2	484	480	3	1	543	1
New Hampshire:										
Manchester.....	1,529	1,490	37	2	763	741	21	1	766	16
Nashua.....	540	530	10	.....	262	255	7	.....	275	3
Massachusetts:										
Boston.....	13,570	13,256	87	215	6,941	6,802	48	89	6,629	39
Brockton.....	1,223	1,207	6	10	632	624	1	7	591	5
Brookline town.....	355	351	2	2	165	162	2	1	190	.....
Cambridge.....	2,323	2,202	15	106	1,158	1,096	8	54	1,165	7
Chelsea.....	779	772	3	4	380	377	2	1	399	1
Chicopee.....	763	755	8	.....	372	368	4	.....	387	4
Everett.....	652	644	2	6	330	326	1	3	322	1
Fall River.....	3,291	3,255	30	6	1,697	1,677	17	3	1,594	13
Fitchburg.....	990	973	17	.....	513	506	7	.....	477	10
Haverhill.....	824	812	6	6	441	434	4	3	383	2
Holyoke.....	1,358	1,333	24	1	684	671	13	.....	674	11
Lawrence.....	2,235	2,182	47	6	1,123	1,104	17	2	1,112	30
Lowell.....	2,326	2,301	24	1	1,158	1,149	9	.....	1,168	15
Lynn.....	1,816	1,785	19	12	873	859	9	5	943	10
Malden.....	931	920	3	8	445	439	3	3	486	.....
New Bedford.....	2,551	2,385	57	109	1,308	1,219	28	56	1,248	29
Newton.....	698	684	7	7	364	355	5	4	384	2
Pittsfield.....	612	599	6	7	320	313	1	6	292	5
Quincy.....	764	756	8	.....	387	384	3	.....	377	5
Salem.....	1,085	1,074	6	5	566	559	4	3	519	2
Somerville.....	1,585	1,571	11	2	823	815	6	1	762	5
Springfield.....	1,846	1,810	14	22	931	912	7	12	915	7

Tamilton.....	779	761	5	13	374	365	1	8	405	396	4	5
Waltham.....	474	466	8	1	249	246	3	.....	225	219	5	1
Worcester.....	3,190	3,138	26	25	1,642	1,611	17	13	1,548	1,527	9	12
Rhode Island:												
Newport.....	462	452	.....	29	248	231	.....	16	214	201	.....	13
Pawtucket.....	1,060	1,033	10	6	535	528	4	2	515	505	6	4
Providence.....	4,760	4,623	32	98	2,364	2,285	18	58	2,396	2,338	14	40
Warwick town.....	635	621	10	4	324	316	6	2	311	305	4	2
Woonsocket.....	952	924	27	1	493	479	14	.....	459	445	13	1
Connecticut:												
Bridgeport ¹	2,360	2,311	21	27	1,183	1,158	10	14	1,177	1,153	11	13
Hartford ¹	2,021	1,970	12	39	1,006	981	6	19	1,015	989	6	20
Meriden town.....	651	645	4	2	336	332	2	2	315	313	2	.....
Meriden city.....	594	588	4	2	309	305	2	2	285	283	2	.....
New Britain ¹	1,199	1,191	7	1	591	589	2	.....	608	602	5	1
New Haven ¹												
Norwich town.....	3,009	2,940	11	57	1,541	1,508	5	27	1,468	1,432	6	30
Stamford town.....	549	539	5	5	286	284	2	.....	263	255	3	5
Stamford city.....	676	660	6	9	354	348	2	3	322	312	4	6
Stamford city.....	623	607	6	9	330	324	2	3	293	283	4	6
Waterbury ¹	1,921	1,885	20	16	965	949	7	9	956	936	13	7
MIDDLE ATLANTIC.												
New York:												
Albany.....	1,529	1,509	10	10	768	760	4	4	761	749	6	6
Amsterdam.....	805	800	3	2	395	393	1	1	410	407	2	1
Auburn.....	609	598	2	9	308	303	1	4	301	295	1	5
Binghamton.....	820	809	4	7	417	412	2	3	403	397	2	4
Buffalo.....	8,973	8,894	62	16	4,544	4,515	23	5	4,429	4,379	39	11
Elmira.....	530	521	2	7	274	271	2	1	256	250	.....	6
Jamestown.....												
Kingston.....	529	526	3	.....	275	274	1	.....	254	252	2	.....
Mount Vernon.....	413	397	1	15	221	212	1	8	192	185	.....	7
New Rochelle.....	635	620	1	14	330	323	.....	7	305	297	1	7
Newburgh.....	696	649	3	44	356	332	2	22	340	317	1	22
New York City.....	417	403	3	11	228	219	2	7	189	184	1	4
New York City.....												
Niagara Falls.....	110,524	108,066	839	1,534	56,037	54,751	458	814	54,487	53,315	381	780
Poughkeepsie.....	734	718	11	4	381	374	5	2	353	344	6	2
Rochester.....	503	486	3	14	267	260	2	5	236	226	1	9
Schenectady.....	4,032	3,992	29	11	2,058	2,039	12	7	1,974	1,953	17	4
Syracuse.....	1,550	1,536	10	4	786	779	6	1	764	757	4	3
Syracuse.....												
Troy.....	2,534	2,503	18	13	1,311	1,293	10	8	1,223	1,210	8	5
Utica.....	1,198	1,180	7	11	611	607	.....	4	587	573	7	7
Watertown.....	1,577	1,567	6	4	801	796	3	2	776	771	3	2
Yonkers.....	463	455	6	2	210	206	2	2	253	249	4	.....
Yonkers.....	2,007	1,965	11	30	1,001	976	5	19	1,006	989	6	11

¹ Town and city coextensive.

TABLE 35.—CHILDREN UNDER 1 YEAR OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

CITY.	WHITE.			Negro.	BOYS.			Total.	GIRLS.			
	Native.	Foreign born.	Total.		White.		Negro.		Total.	White.		Negro.
					Native.	Foreign born.				Native.	Foreign born.	
MIDDLE ATLANTIC—continued.												
New Jersey:												
Atlantic City.....	752	638	114	391	335	56	361	303	.....	58	
Bayonne.....	1,088	1,000	17	868	855	7	890	806	5	10		
Camden.....	2,081	1,948	124	1,012	948	63	1,069	1,000	7	61		
East Orange.....	562	534	26	278	265	12	284	269	1	14		
Elizabeth.....	1,902	1,857	34	974	947	19	928	910	3	15		
Hoboken.....	1,499	1,483	2	758	748	9	741	735	5	1		
Jersey City.....	6,229	6,061	129	3,171	3,083	69	3,058	2,978	20	60		
Newark.....	8,519	8,269	200	4,345	4,217	98	4,174	4,062	19	102		
Orange.....	667	619	44	333	310	20	334	309	1	24		
Passaic.....	1,767	1,720	12	905	878	6	862	842	14	6		
Paterson.....	2,584	2,541	25	1,292	1,267	16	1,292	1,274	9	9		
Perth Amboy.....	1,141	1,120	7	573	562	8	568	558	6	4		
Trenton.....	2,267	2,219	36	1,162	1,137	18	1,105	1,082	5	18		
West Hoboken town.....	787	777	2	388	382	1	399	395	8	1		
Pennsylvania:												
Allentown.....	1,228	1,223	5	610	605	5	618	618	.....	3	
Altoona.....	1,139	1,130	7	572	568	4	567	562	2	28		
Chester.....	739	649	86	394	384	58	345	315	2	4		
Easton.....	534	526	5	258	255	1	276	271	1	2		
Erie.....	1,513	1,507	4	759	757	2	754	750	2	2		
Harrisburg.....	1,101	1,022	76	557	507	48	544	515	1	28		
Hazleton.....	670	668	2	346	346	.....	324	322	2	.....	
Johnstown.....	1,466	1,447	5	754	744	8	712	708	7	2		
Lancaster.....	898	890	7	465	462	2	438	428	.....	6	
McKeesport.....	1,193	1,169	23	637	606	11	556	543	1	12		
New Castle.....	922	906	8	481	472	5	441	434	4	3		
Norristown.....	484	459	21	290	217	11	254	242	2	10		
Philadelphia.....	32,869	31,144	1,595	16,652	15,747	825	16,267	15,397	70	770		

Pittsburgh.....	12,578	12,060	69	459	6,462	6,184	29	239	6,126	5,866	40	220
Reading.....	2,042	2,025	6	11	1,012	1,004	4	4	1,080	1,021	2	7
Acranton.....	3,355	3,324	20	10	1,701	1,689	9	2	1,664	1,635	11	8
Shenandoah.....	877	871	5	1	435	433	2	.....	442	438	3	1
Wilkes-Barre.....	1,504	1,578	7	9	815	804	5	6	779	774	2	3
Williamsport.....	532	518	2	12	268	262	.....	6	264	256	2	6
York.....	877	850	.....	27	430	419	.....	11	447	431	.....	16
EAST NORTH CENTRAL.												
Ohio:												2
Akron.....	1,475	1,457	8	10	718	710	4	4	757	747	4	6
Canton.....	965	951	7	7	435	430	3	2	530	521	4	5
Cincinnati.....	6,120	5,847	15	258	3,061	2,982	8	121	3,069	2,915	7	157
Cleveland.....	13,814	13,613	81	118	6,952	6,855	46	50	6,802	6,758	35	68
Columbus.....	2,827	2,653	4	169	1,403	1,324	2	76	1,424	1,329	2	93
Dayton.....	2,214	2,132	6	75	1,125	1,085	3	36	1,089	1,047	3	39
Hamilton.....	698	672	.....	16	327	321	.....	6	361	351	.....	10
Lima.....	559	538	2	19	298	288	.....	10	261	250	2	9
Lorain.....	879	866	7	6	449	446	2	1	430	420	5	5
Newark.....	369	364	.....	5	195	192	.....	3	174	172	.....	2
Springfield.....	779	692	1	86	300	343	.....	47	389	349	1	39
Toledo.....	3,304	3,180	10	26	1,685	1,626	5	16	1,619	1,554	5	10
Youngstown.....	1,954	1,901	16	36	982	969	6	17	972	942	10	19
Zanesville.....	478	455	2	21	229	218	1	10	249	237	1	11
Indiana:												
Evansville.....	1,234	1,158	1	75	602	564	1	37	632	594	.....	38
Fort Wayne.....	1,104	1,096	2	5	565	558	2	5	539	538	.....	.....
Indianapolis.....	3,846	3,500	.....	346	1,856	1,777	.....	179	1,890	1,723	.....	167
South Bend.....	1,375	1,358	11	6	660	650	7	3	715	708	4	3
Terre Haute.....	957	911	1	45	490	474	.....	16	467	437	1	29
Illinois:												
Aurora.....	530	521	6	3	271	263	6	2	259	258	.....	1
Bloomington.....	421	402	.....	19	203	191	.....	12	218	211	.....	7
Chicago.....	49,073	48,193	322	544	24,766	24,327	154	279	24,307	23,866	168	265
Danville.....	509	485	.....	24	256	248	.....	8	253	237	.....	16
Decatur.....	557	547	1	9	291	285	.....	6	266	262	1	3
East St. Louis.....	1,290	1,168	17	105	664	595	13	56	626	573	4	49
Elgin.....	420	415	.....	5	219	215	.....	4	201	200	.....	1
Joliet.....	859	848	4	7	429	425	1	3	430	423	3	4
Peoria.....	983	968	2	23	466	464	2	10	517	504	.....	13
Quincy.....	547	527	.....	20	268	261	.....	7	279	266	.....	13
Rockford.....	785	777	5	3	412	407	3	2	373	370	2	1
Springfield.....	932	894	3	35	466	447	2	17	466	447	1	18

TABLE 35.—CHILDREN UNDER 1 YEAR OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

CITY.	Total.	WHITE.		Negro.	BOYS.			GIRLS.				
		Native.	Foreign born		Total.	White.		Total.	White.			
						Native.	Foreign born.		Native.	Foreign born.		
EAST NORTH CENTRAL—continued.												
Michigan:												
Battle Creek.....	475	460	1	14	234	228	.....	6	241	232	1	8
Bay City.....	985	918	3	4	514	512	1	1	471	406	2	3
Detroit.....	10,442	10,273	96	73	5,257	5,172	45	40	5,185	5,101	51	33
Flint.....	762	742	17	3	360	352	8	.....	402	390	9	3
Grand Rapids.....	2,440	2,416	15	8	1,223	1,211	6	6	1,217	1,205	9	2
Jackson.....	527	526	.....	1	253	252	.....	1	274	274	.....	.....
Kalamazoo.....	747	733	4	10	377	367	3	7	370	366	1	3
Lansing.....	595	584	3	8	282	278	1	3	313	306	2	5
Saginaw.....	934	927	3	4	485	479	3	3	449	448	.....	1
Wisconsin:												
Green Bay.....	591	586	.....	2	286	283	.....	1	305	303	.....	1
La Crosse.....	524	524	.....	.....	258	258	.....	.....	266	266	.....	.....
Madison.....	474	468	1	4	243	241	.....	2	231	227	1	2
Milwaukee.....	7,955	7,906	34	14	4,154	4,131	17	6	3,801	3,775	17	8
Oshkosh.....	680	675	1	4	335	333	.....	2	345	342	1	2
Racine.....	798	793	5	.....	396	392	4	.....	402	401	1	.....
Sheboygan.....	632	621	11	.....	340	334	6	.....	292	287	5	.....
Superior.....	872	862	8	1	448	442	5	.....	424	420	3	1
WEST NORTH CENTRAL.												
Minnesota:												
Duluth.....	1,609	1,588	18	3	801	789	12	.....	808	799	6	3
Minneapolis.....	5,435	5,383	29	22	2,692	2,668	13	11	2,743	2,715	16	11
St. Paul.....	3,808	3,762	16	29	1,975	1,947	10	18	1,833	1,815	6	11
Iowa:												
Cedar Rapids.....	544	538	2	4	270	265	2	3	274	273	.....	1
Clinton.....	382	374	1	7	211	205	1	5	171	169	.....	2
Council Bluffs.....	546	544	.....	2	286	284	.....	2	260	260	.....	.....
Davenport.....	743	740	.....	3	368	366	.....	2	375	374	.....	1

Des Moines.....	1,657	1,595	5	57	850	818	2	30	807	777	3	27
Dubuque.....	993	990	2	1	351	350	1	.....	342	340	1	1
Sioux City.....	845	834	7	5	412	407	4	1	434	437	3	4
Waterloo.....	530	527	3	.....	251	248	3	.....	279	279	.....	.....
Missouri:												
Joplin.....	642	635	.....	7	300	296	.....	4	342	339	.....	3
Kansas City.....	3,839	3,589	11	235	1,947	1,818	4	123	1,892	1,771	7	112
St. Joseph.....	1,236	1,183	1	52	617	589	1	27	619	594	.....	25
St. Louis.....	12,439	11,854	44	538	6,268	5,988	19	248	6,181	5,866	25	290
Springfield.....	731	704	.....	27	361	350	.....	11	370	354	.....	16
Nebraska:												
Lincoln.....	957	943	4	10	451	471	3	7	476	473	1	3
Omaha.....	2,093	2,041	10	41	1,045	1,020	6	18	1,048	1,021	4	23
South Omaha.....	649	636	3	10	314	306	3	5	335	330	.....	5
Kansas:												
Kansas City.....	1,060	1,516	4	139	845	767	3	74	815	749	1	65
Topeka.....	782	716	6	60	378	345	2	31	404	371	4	29
Wichita.....	918	880	.....	38	453	457	.....	16	465	443	.....	23
SOUTH ATLANTIC.												
Delaware:												
Wilmington.....	1,874	1,733	9	132	945	867	5	73	929	866	4	59
Maryland:												
Baltimore.....	10,239	8,859	32	1,346	5,174	4,466	23	684	5,065	4,393	9	662
District of Columbia:												
Washington ¹	5,499	4,018	7	1,458	2,732	1,993	4	782	2,757	2,025	3	726
Virginia:												
Lynchburg.....	673	485	.....	188	345	246	.....	99	328	239	.....	89
Norfolk.....	1,283	872	3	406	644	451	3	189	639	491	.....	217
Portsmouth.....	675	452	.....	223	333	230	.....	103	342	222	.....	120
Richmond.....	2,687	1,689	2	996	1,345	853	.....	492	1,342	836	2	504
Roanoke.....	872	682	.....	190	452	352	.....	100	420	330	.....	90
West Virginia:												
Huntington.....	585	563	.....	22	313	301	.....	12	272	262	.....	10
Wheeling.....	781	762	3	17	391	380	1	10	390	382	1	7
North Carolina:												
Charlotte.....	870	616	1	253	448	319	1	128	422	297	.....	125
Wilmington.....	622	333	.....	289	300	155	.....	145	322	178	.....	144
South Carolina:												
Charleston.....	1,103	531	1	571	542	263	1	278	561	268	.....	293
Columbia.....	538	322	1	215	270	172	.....	98	268	159	1	117

¹ Population is for the District of Columbia, with which the city is coextensive.

Louisiana:	6,248	5,227	8	1,612	3,421	2,613	5	802	3,427	2,614	3	810
New Orleans.....	471	263	.....	218	280	124	.....	100	241	120	.....	112
Shreveport .....			.....				.....				.....
Oklahoma:	468	337	.....	142	227	158	.....	64	261	179	.....	78
Muskogee.....	1,140	1,084	1	106	568	520	1	42	577	614	.....	68
Oklahoma City .....											.....
Texas:	529	414	2	112	266	208	1	84	271	211	1	59
Austin.....	1,543	1,300	4	289	806	691	1	114	737	609	3	128
Dallas	1,003	929	55	19	518	479	26	13	485	450	29	6
El Paso.....	1,335	1,145	4	186	673	561	3	89	663	564	1	97
Fort Worth.....											.....
Galveston.....	660	535	6	119	345	273	4	68	315	262	2	51
Houston.....	1,401	1,049	2	358	733	561	1	179	689	489	1	179
San Antonio.....	2,183	1,968	89	180	1,067	669	21	85	1,116	1,008	18	96
Waco.....	483	401	.....	82	289	189	.....	59	344	212	.....	32
MONTAIN.												
Montana:	772	767	1	2	396	368	.....	2	376	374	1	.....
Butte.....											.....
Colorado:	423	407	1	15	231	227	.....	4	192	180	1	11
Colorado Springs.....	3,445	3,264	8	707	1,786	1,746	3	37	1,657	1,618	5	23
Denver	859	841	2	16	476	464	1	11	383	377	1	5
Pueblo.....											.....
Utah:	647	639	2	3	331	329	2	.....	316	310	.....	3
Ogden.....	2,173	2,155	10	7	1,068	1,077	6	4	1,065	1,078	4	3
Salt Lake City.....											.....
PACIFIC.												
Washington:	3,466	3,340	30	21	1,725	1,665	17	9	1,741	1,675	13	12
Seattle.....	2,051	2,021	18	10	1,042	1,026	8	7	1,009	995	10	3
Spokane.....	1,469	1,444	11	9	746	733	6	4	723	711	5	5
Tacoma.....											.....
Oregon:	3,086	3,023	31	10	1,583	1,554	16	4	1,503	1,469	15	6
Portland.....											.....
California:	4,798	4,554	42	114	2,484	2,359	26	59	2,314	2,195	16	55
Los Angeles.....	2,669	2,545	5	50	1,331	1,266	5	25	1,338	1,279	.....	25
Oakland.....	6,153	6,000	29	22	3,169	3,086	18	11	2,984	2,914	12	11
San Francisco.....	665	642	.....	1	364	354	.....	.....	301	288	.....	1
Berkeley.....											.....
Pasadena.....	417	399	3	12	203	196	3	4	214	203	.....	8
Sacramento.....	656	632	1	5	348	331	1	3	308	301	.....	2
San Diego.....	552	541	5	3	282	277	3	.....	270	264	2	3
San Jose.....	480	470	6	1	250	247	3	.....	230	223	3	1

Taunton.....	3,522	3,394	78	50	1,767	1,709	34	24	1,755	1,685	44	26
Waltham.....	2,234	2,168	3	3	1,169	1,133	36	.....	1,065	1,035	27	3
Worcester.....	14,492	14,068	318	104	7,384	7,158	170	64	7,108	6,910	148	50
Rhode Island:												
Newport.....	2,235	2,080	17	125	1,119	1,047	8	63	1,116	1,043	9	62
Pawtucket.....	4,874	4,664	184	21	2,460	2,354	96	8	2,414	2,310	88	13
Providence.....	21,814	20,784	648	458	10,826	10,263	293	267	10,969	10,521	255	201
Warwick town.....	2,786	2,667	106	11	1,365	1,303	56	5	1,421	1,364	50	6
Woonsocket.....	4,277	3,956	318	3	2,136	1,978	158	.....	2,141	1,978	160	3
Connecticut:												
Bridgeport ¹	10,608	10,196	292	114	5,331	5,118	155	56	5,277	5,080	137	58
Hartford ¹	9,565	9,174	241	160	4,795	4,600	126	69	4,770	4,574	115	81
Meriden town.....	3,039	2,960	68	11	1,569	1,523	42	4	1,470	1,437	26	7
Meriden city.....	2,607	2,530	66	11	1,360	1,316	40	4	1,247	1,214	26	7
New Britain ¹	5,282	5,140	137	5	2,681	2,606	74	1	2,601	2,534	63	4
New Haven ¹												
New Haven town.....	13,702	13,125	305	271	6,893	6,609	149	134	6,809	6,516	156	137
Norwich town.....	2,574	2,466	73	35	1,299	1,243	43	13	1,275	1,223	30	22
Stamford town.....	3,045	2,915	96	83	1,504	1,442	47	14	1,541	1,473	49	19
Stamford city.....	2,768	2,642	92	33	1,369	1,310	44	14	1,399	1,332	48	19
Waterbury ¹	8,385	8,065	244	85	4,313	4,153	118	41	4,072	3,902	126	44
MIDDLE ATLANTIC.												
New York:												
Albany.....	7,603	7,448	117	35	3,867	3,795	52	19	3,736	3,653	65	16
Amsterdam.....	3,258	3,153	91	14	1,663	1,606	48	9	1,595	1,547	43	5
Auburn.....	2,962	2,862	55	45	1,470	1,423	26	21	1,492	1,439	29	24
Binghamton.....	3,691	3,610	46	34	1,910	1,869	21	20	1,781	1,741	25	14
Buffalo.....	42,257	41,285	890	88	21,262	20,779	436	45	20,995	20,506	444	43
Elmira.....	2,644	2,596	24	24	1,358	1,337	13	8	1,286	1,259	11	16
Jamesstown.....												
Kingston.....	2,756	2,680	70	6	1,393	1,347	41	5	1,363	1,333	29	1
Mount Vernon.....	2,119	2,038	19	62	1,078	1,039	11	28	1,041	999	8	34
New Rochelle.....	3,064	2,936	61	67	1,593	1,526	30	37	1,471	1,410	31	30
New York City.....	3,121	2,883	50	188	1,573	1,454	23	96	1,548	1,429	27	92
	507,080	485,588	14,660	6,676	255,729	245,050	7,364	3,227	251,351	240,538	7,296	3,449
Newburgh.....												
Niagara Falls.....	2,173	2,105	31	37	1,119	1,088	16	15	1,054	1,017	15	22
Poughkeepsie.....	3,279	3,127	136	15	1,673	1,595	70	8	1,606	1,532	66	7
Rochester.....	2,313	2,225	33	55	1,209	1,180	12	17	1,104	1,045	21	38
Schenectady.....	19,066	18,432	576	58	9,552	9,266	262	24	9,514	9,166	314	34
	7,859	7,677	166	16	3,943	3,845	91	7	3,916	3,832	75	9
Syracuse.....												
Troy.....	11,882	11,597	218	66	6,029	5,882	112	35	5,853	5,715	106	31
Utica.....	5,839	5,726	77	36	3,011	2,949	47	15	2,828	2,777	30	21
Watertown.....	7,070	6,876	172	22	3,583	3,492	81	10	3,487	3,384	91	12
Yonkers.....	2,295	2,214	77	4	1,148	1,107	38	3	1,147	1,107	39	1
	8,978	8,664	177	136	4,538	4,372	95	70	4,440	4,292	82	66

¹ Town and city coextensive.

Pittsburgh.....	57,788	54,737	809	2,240	29,377	27,827	421	1,128	28,411	26,910	368	1,112
Reading.....	9,543	9,400	83	60	4,799	4,731	37	31	4,744	4,669	46	29
Scranton.....	15,348	15,025	283	37	7,720	7,573	129	17	7,628	7,452	154	20
Shenandoah.....	3,925	3,852	69	4	1,839	1,855	33	1	2,036	1,997	36	3
Wilkes-Barre.....	7,755	7,597	108	49	4,019	3,937	56	25	3,736	3,660	52	24
Williamsport.....	2,722	2,620	18	84	1,329	1,281	9	89	1,393	1,339	9	45
York.....	4,315	4,178	8	129	2,148	2,090	7	51	2,167	2,088	1	73
EAST NORTH CENTRAL.												
Ohio:												
Akron.....	6,758	6,561	143	54	3,401	3,315	58	28	3,357	3,246	85	26
Canton.....	4,599	4,511	62	16	2,262	2,222	32	8	2,327	2,289	30	8
Cincinnati.....	29,172	27,673	350	1,148	14,907	14,061	160	586	14,365	13,612	190	562
Cleveland.....	62,512	60,226	1,662	519	31,662	30,589	946	246	30,830	29,737	816	273
Columbus.....	14,337	13,406	91	836	7,263	6,807	45	408	7,074	6,599	46	428
Dayton.....	10,647	10,165	107	374	5,424	5,164	57	202	5,223	5,001	50	172
Hamilton.....	3,436	3,354	19	62	1,717	1,679	10	28	1,719	1,675	9	34
Lima.....	2,885	2,788	14	83	1,450	1,397	7	46	1,435	1,391	7	37
Lorain.....	3,892	3,713	137	42	1,935	1,851	67	17	1,957	1,862	70	25
Newark.....	2,136	2,098	12	26	1,109	1,090	7	12	1,027	1,008	5	14
Springfield.....	3,975	3,583	12	380	1,979	1,772	6	201	1,996	1,811	6	179
Toledo.....	15,891	15,612	164	114	8,056	7,917	84	54	7,835	7,695	80	60
Youngstown.....	8,573	8,448	205	159	4,471	4,262	131	78	4,402	4,186	134	81
Zanesville.....	2,463	2,323	10	130	1,238	1,153	7	68	1,235	1,170	3	62
Indiana:												
Evansville.....	6,150	5,710	12	428	3,117	2,900	9	208	3,033	2,810	3	220
Fert Wayne.....	5,441	5,306	42	32	2,721	2,677	27	17	2,720	2,689	15	15
Indianapolis.....	18,697	17,071	68	1,557	9,501	8,681	33	787	9,196	8,330	35	770
South Bend.....	6,330	6,061	182	133	3,143	3,086	78	26	3,177	3,045	104	37
Terre Haute.....	5,052	4,885	31	196	2,509	2,403	16	90	2,543	2,432	15	96
Illinois:												
Aurora.....	2,612	2,550	46	16	1,310	1,275	28	7	1,302	1,275	18	9
Bloomington.....	2,057	1,971	14	72	1,013	971	5	37	1,044	1,000	9	35
Chicago.....	223,767	215,475	5,765	2,472	112,937	108,806	2,885	1,218	110,830	106,669	2,880	1,254
Danville.....	2,497	2,365	5	127	1,270	1,208	1	61	1,227	1,157	4	66
Decatur.....	2,744	2,665	26	53	1,397	1,357	12	28	1,347	1,308	14	25
East St. Louis.....	6,052	5,441	100	511	3,032	2,739	55	238	3,020	2,702	45	273
Elgin.....	1,909	1,873	21	15	975	957	8	10	934	916	13	5
Joliet.....	3,738	3,618	83	35	1,865	1,807	44	13	1,873	1,811	39	22
Peoria.....	5,338	5,210	35	93	2,650	2,598	17	45	2,688	2,622	18	48
Quincy.....	2,838	2,727	6	105	1,430	1,384	3	43	1,408	1,343	3	62
Rockford.....	3,828	3,722	95	11	1,939	1,892	42	5	1,869	1,830	53	6
Springfield.....	4,755	4,495	49	221	2,394	2,259	24	111	2,361	2,226	25	110

TABLE 36.—CHILDREN UNDER 5 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

CITY.	WHITE.			Negro.	BOYS.			GIRLS.					
	Total.	Foreign born.			Total.	White.		Negro.	Total.	White.		Negro.	
		Native.	Foreign born.			Native.	Foreign born.			Native.	Foreign born.		
EAST NORTH CENTRAL—continued.													
Michigan:													
Battle Creek.....	2,027	1,954	16	57	982	945	8	29	1,045	1,009	8	28	
Bay City.....	5,020	4,937	67	16	2,608	2,566	38	4	2,412	2,371	29	12	
Detroit.....	48,715	46,669	1,715	330	24,588	23,553	858	176	24,127	23,116	857	154	
Flint.....	3,450	3,268	152	30	1,701	1,614	72	15	1,749	1,654	80	15	
Grand Rapids.....	11,280	11,008	235	36	5,571	5,446	106	19	5,709	5,562	129	17	
Jackson.....	2,541	2,503	26	12	1,255	1,234	17	4	1,286	1,269	9	8	
Kalamazoo.....	3,440	3,313	76	51	1,741	1,675	40	26	1,699	1,638	36	25	
Lansing.....	2,586	2,522	40	24	1,327	1,295	21	11	1,259	1,227	19	13	
Saginaw.....	4,706	4,603	90	13	2,392	2,337	49	6	2,314	2,266	41	7	
Wisconsin:													
Green Bay.....	2,965	2,936	12	6	1,450	1,431	9	3	1,515	1,505	3	3	
La Crosse.....	2,658	2,646	11	1	1,306	1,302	4	.....	1,352	1,344	7	1
Madison.....	2,248	2,210	21	15	1,092	1,077	10	5	1,156	1,133	11	10	
Milwaukee.....	37,834	36,994	790	46	19,086	18,640	422	24	18,748	18,354	368	22	
Oshkosh.....	3,343	3,281	47	14	1,713	1,678	26	8	1,630	1,603	21	6	
Racine.....	3,785	3,673	107	5	1,937	1,875	61	1	1,848	1,798	46	4	
Sheboygan.....	2,883	2,777	103	3	1,536	1,490	45	1	1,347	1,287	58	2	
Superior.....	4,362	4,234	103	10	2,120	2,056	56	1	2,242	2,178	47	9	
WEST NORTH CENTRAL.													
Minnesota:													
Duluth.....	7,486	7,280	179	23	3,774	3,662	99	11	3,712	3,618	80	12	
Minneapolis.....	25,797	25,257	422	113	13,031	12,759	212	58	12,766	12,498	210	55	
St. Paul.....	18,426	17,932	326	164	9,390	9,151	157	81	9,036	8,781	169	83	
Iowa:													
Cedar Rapids.....	2,894	2,831	49	14	1,431	1,404	19	8	1,463	1,427	30	6	
Clinton.....	2,140	2,069	12	59	1,123	1,086	6	31	1,017	983	6	28	
Council Bluffs.....	2,736	2,711	17	8	1,366	1,352	9	5	1,370	1,359	8	3	
Davenport.....	3,084	3,576	23	33	1,826	1,801	8	17	1,808	1,775	15	16	

Des Moines.....	7,850	7,552	69	229	4,000	3,852	89	109	3,850	3,700	30	120
Dubuque.....	3,191	3,168	17	6	1,631	1,619	9	3	1,560	1,549	8	3
Sioux City.....	4,019	3,931	66	21	2,017	1,977	32	8	2,002	1,954	34	13
Waterloo.....	2,547	2,526	21	.....	1,279	1,263	16	.....	1,268	1,263	5	.....
Missouri:												
Joplin.....	3,424	3,368	1	55	1,702	1,675	.....	27	1,722	1,693	1	28
Kansas City.....	18,596	17,202	174	1,211	9,384	8,672	82	623	9,214	8,530	92	598
St. Joseph.....	6,454	6,202	42	255	3,178	3,072	23	128	3,276	3,130	19	127
St. Louis.....	60,100	56,574	825	2,685	30,290	28,579	389	1,314	29,810	27,995	436	1,371
Springfield.....	3,448	3,298	.....	150	1,679	1,597	.....	82	1,769	1,701	.....	68
Nebraska:												
Lincoln.....	4,317	4,133	143	41	2,203	2,106	72	25	2,114	2,027	71	16
Omaha.....	10,459	10,037	176	243	5,261	5,040	97	122	5,198	4,997	79	121
South Omaha.....	3,165	3,041	72	52	1,570	1,504	37	29	1,595	1,537	35	23
Kansas:												
Kansas City.....	8,264	7,415	96	745	4,102	3,696	49	351	4,162	3,719	47	394
Topeka.....	3,738	3,343	55	340	1,919	1,728	25	166	1,819	1,615	30	174
Wichita.....	4,455	4,224	27	204	2,258	2,137	11	110	2,197	2,087	16	94
SOUTH ATLANTIC.												
Delaware:												
Wilmington.....	8,569	7,900	92	577	4,257	3,922	49	286	4,312	3,978	43	291
Maryland:												
Baltimore.....	51,986	44,882	474	6,628	26,189	22,677	258	3,253	25,797	22,205	216	3,375
District of Columbia:												
Washington.....	26,669	19,222	139	7,290	13,401	9,736	74	3,581	13,268	9,486	65	3,709
Virginia:												
Lynchburg.....	3,095	2,209	3	882	1,525	1,072	1	451	1,570	1,137	2	431
Norfolk.....	6,198	4,146	39	2,008	3,115	2,103	18	992	3,083	2,043	21	1,016
Portsmouth.....	3,343	2,272	7	1,064	1,690	1,172	4	514	1,653	1,100	3	550
Richmond.....	11,602	7,556	27	4,019	5,751	3,770	6	1,975	5,851	3,786	21	2,044
Roanoke.....	3,865	3,092	7	766	1,965	1,577	4	384	1,900	1,515	3	382
West Virginia:												
Huntington.....	3,302	3,149	3	150	1,700	1,620	1	79	1,602	1,529	2	71
Wheeling.....	3,868	3,761	28	79	1,976	1,917	15	44	1,892	1,844	13	35
North Carolina:												
Charlotte.....	3,981	2,748	8	1,225	2,006	1,404	5	597	1,975	1,344	3	628
Wilmington.....	2,827	1,545	2	1,280	1,445	778	1	666	1,382	767	1	614
South Carolina:												
Charleston.....	5,666	2,667	14	2,985	2,868	1,391	6	1,471	2,796	1,276	8	1,514
Columbia.....	2,570	1,525	4	1,041	1,320	791	2	527	1,250	734	2	514

¹ Population is for the District of Columbia, with which the city is coextensive.

Louisiana:	32,047	24,202	151	7,004	15,984	12,126	66	3,726	16,113	12,124	86	3,883
New Orleans.....	2,546	1,355	10	1,181	1,245	670	5	570	1,301	685	5	611
Shreveport.....												
Oklahoma:	2,358	1,008	3	696	1,162	815	2	319	1,196	798	1	377
Muskogee.....	5,671	5,002	14	555	2,833	2,574	7	246	2,888	2,518	7	309
Oklahoma City.....												
Texas:	2,607	1,931	15	669	1,295	970	8	315	1,312	901	7	344
Austin.....	8,048	6,738	37	1,271	4,000	3,308	18	618	4,018	3,340	19	698
Dallas.....	4,445	3,859	472	114	2,218	1,924	287	57	2,227	1,935	285	57
El Paso.....	6,960	5,848	89	1,063	3,524	2,907	26	532	3,426	2,861	14	531
Fort Worth.....												
Galveston.....	3,232	2,646	41	545	1,618	1,321	21	276	1,614	1,325	20	269
Houston.....	6,781	4,909	47	1,790	3,891	2,451	26	999	3,390	2,488	21	881
San Antonio.....	9,977	8,699	291	895	5,019	4,873	192	452	4,908	4,316	189	443
Waco.....	2,552	2,053	8	491	1,316	1,049	4	268	1,296	1,004	4	228
MONTAIN.												
Montana:	3,439	3,257	66	7	1,780	1,745	26	5	1,669	1,612	36	2
Butte.....												
Colorado:	2,126	2,041	7	78	1,108	1,669	4	23	1,017	972	3	42
Colorado Springs.....	16,879	16,841	200	313	8,442	8,186	29	147	8,437	8,155	101	166
Denver.....	4,321	4,179	42	97	2,260	2,192	26	42	2,061	1,967	17	55
Pueblo.....												
Utah:	3,068	2,019	33	6	1,558	1,541	15	.....	1,510	1,478	18	6
Ogden.....	10,451	10,247	158	33	5,266	5,100	80	17	5,185	5,057	78	16
Salt Lake City.....												
PACIFIC.												
Washington:	17,043	16,193	447	99	8,624	8,190	227	53	8,419	8,008	220	46
Seattle.....	9,066	8,807	213	37	4,620	4,491	107	17	4,446	4,316	106	20
Spokane.....	7,094	6,838	176	44	3,537	3,400	95	21	3,557	3,438	81	23
Tacoma.....												
Oregon:	14,158	13,638	352	45	7,155	6,890	180	21	7,003	6,748	172	24
Portland.....												
California:	22,817	21,403	535	556	11,508	10,798	268	265	11,309	10,605	267	291
Los Angeles.....	12,585	11,912	185	216	6,393	6,056	102	107	6,192	5,857	83	109
Oakland.....	29,178	27,948	562	101	14,866	14,224	268	52	14,312	13,714	274	49
San Francisco.....	3,236	3,106	44	15	1,646	1,574	28	9	1,590	1,531	16	6
Berkeley.....												
Pasadena.....	2,039	1,919	48	59	1,042	984	24	29	997	935	24	30
Sacramento.....	3,060	2,896	37	29	1,574	1,477	15	15	1,506	1,421	22	14
San Diego.....	2,689	2,586	66	29	1,369	1,320	29	15	1,320	1,266	37	14
San Jose.....	2,256	2,178	36	18	1,184	1,121	17	6	1,102	1,057	18	9

TABLE 37.—CHILDREN 5 TO 9 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910.

CITY.	Total.	WHITE.		Negro.	BOYS.			GIRLS.		
		Native.	Foreign born.		Total.	White.		Total.	White.	
						Native.	Foreign born.		Native.	Foreign born.
NEW ENGLAND.										
Maine:										
Lewiston.....	2,447	2,104	342	1	1,264	1,090	174	1,183	1,014	1
Portland.....	4,366	4,113	239	14	2,203	2,080	119	2,163	2,033	10
New Hampshire:										
Manchester.....	4,248	3,700	546	2	3,078	2,641	436	1,170	1,059	1
Nashua.....	4,320	3,736	584	.....	3,203	2,726	477	1,117	1,010	.....
Massachusetts:										
Boston.....	56,779	51,050	4,971	742	28,568	26,699	2,496	28,211	25,351	376
Brockton.....	4,566	4,222	287	57	2,269	2,107	136	2,297	2,115	31
Brookline town.....	1,768	1,726	40	2	891	865	24	877	861	.....
Cambridge.....	9,471	8,412	653	405	4,794	4,272	320	4,677	4,140	203
Chelsea.....	3,151	2,514	619	17	1,626	1,279	337	1,525	1,235	8
Chicopee.....	2,757	2,536	221	.....	1,398	1,285	113	1,359	1,251	.....
Everett.....	3,092	2,819	180	93	1,595	1,469	85	1,497	1,350	52
Fall River.....	12,492	11,214	1,256	22	6,162	5,528	621	6,330	5,686	9
Fitchburg.....	3,533	3,260	273	.....	1,799	1,670	129	1,734	1,590	.....
Haverhill.....	3,648	3,414	203	31	1,825	1,694	118	1,823	1,720	18
Holyoke.....	5,765	5,199	561	5	2,811	2,571	238	2,954	2,628	3
Lawrence.....	7,647	6,480	1,153	14	3,776	3,205	566	3,871	3,275	9
Lowell.....	9,371	8,475	887	9	4,633	4,199	430	4,738	4,276	5
Lynn.....	6,721	6,037	625	59	3,412	3,073	313	3,309	2,964	33
Malden.....	4,148	3,801	298	49	2,051	1,881	149	2,097	1,920	28
New Bedford.....	8,864	7,231	1,374	258	4,473	3,652	691	4,391	3,579	129
Newton.....	3,359	3,205	124	30	1,692	1,620	55	1,667	1,585	13
Pittsfield.....	2,676	2,493	152	31	1,366	1,275	74	1,310	1,218	14
Quincy.....	3,224	2,923	296	4	1,610	1,451	156	1,614	1,472	1
Salem.....	4,143	3,833	298	10	2,055	1,917	130	2,088	1,916	2
Somerville.....	6,554	6,253	277	24	3,271	3,111	147	3,288	3,143	11
Springfield.....	7,170	6,538	526	104	3,625	3,306	273	3,545	3,262	60

Taunton.....	3,066	2,830	205	31	1,548	1,435	98	20	1,518	1,395	112	11
Waltham.....	2,209	2,094	112	3	1,145	1,074	68	3	1,064	1,020	44	.....
Worcester.....	12,939	11,839	993	106	6,540	5,976	516	47	6,399	5,863	477	59
Rhode Island:												
Newport.....	2,056	1,852	66	136	1,032	935	33	62	1,024	917	33	74
Pawtucket.....	4,705	4,270	409	24	2,390	2,153	219	8	2,325	2,117	190	16
Providence.....	18,707	16,628	1,694	372	9,349	8,238	835	167	9,358	8,288	859	205
Warwick town.....	2,687	2,424	244	18	1,312	1,182	121	8	1,375	1,242	123	10
Woonsocket.....	4,059	3,412	647	.....	1,992	1,672	320	.....	2,067	1,740	327	.....
Connecticut:												
Bridgeport ¹	8,898	7,980	805	110	4,442	3,955	429	58	4,456	4,025	376	52
Hartford ¹	8,580	7,675	759	146	4,299	3,849	366	74	4,291	3,826	393	72
Meriden town.....	2,928	2,745	171	12	1,477	1,383	89	5	1,451	1,362	82	7
Meriden city.....	2,463	2,297	154	12	1,240	1,152	83	5	1,223	1,145	71	7
New Britain ¹	4,308	3,907	388	13	2,176	1,963	208	5	2,132	1,944	180	8
New Haven ¹	12,438	11,072	1,119	246	6,163	5,462	572	128	6,275	5,610	547	118
Norwich town.....	2,500	2,246	208	46	1,291	1,172	98	21	1,209	1,074	110	26
Stamford town.....	2,652	2,371	261	20	1,382	1,219	152	11	1,270	1,152	109	9
Stamford city.....	2,394	2,124	250	20	1,257	1,100	146	11	1,137	1,024	104	9
Waterbury ¹	7,237	6,537	622	77	3,647	3,305	308	33	3,590	3,232	314	44
MIDDLE ATLANTIC.												
New York:												
Albany.....	7,406	7,005	322	78	3,713	3,526	153	33	3,693	3,479	169	45
Amsterdam.....	2,312	2,119	186	7	1,194	1,093	96	3	1,118	1,026	88	4
Auburn.....	2,388	2,255	105	28	1,216	1,150	52	14	1,172	1,105	53	14
Binghamton.....	3,302	3,121	150	30	1,652	1,563	75	13	1,650	1,558	75	17
Buffalo.....	38,312	35,813	2,405	89	19,038	17,776	1,217	43	19,274	18,037	1,188	46
Elmira.....	2,589	2,479	85	25	1,314	1,258	42	14	1,275	1,221	43	11
Jamestown.....	2,472	2,261	205	6	1,250	1,141	103	6	1,222	1,120	102	.....
Kingston.....	2,176	2,059	51	66	1,067	1,002	29	36	1,109	1,057	22	30
Mount Vernon.....	2,835	2,537	218	80	1,432	1,290	107	35	1,403	1,247	111	45
New Rochelle.....	2,659	2,321	210	128	1,333	1,178	95	60	1,326	1,143	115	68
New York City.....	438,263	375,280	57,736	5,114	219,110	187,663	28,969	2,401	219,153	187,627	28,747	2,713
Newburgh.....	2,241	2,130	70	41	1,146	1,084	36	26	1,095	1,046	34	15
Niagara Falls.....	2,578	2,210	356	12	1,273	1,093	173	7	1,305	1,117	183	5
Poughkeepsie.....	2,193	2,066	82	45	1,104	1,048	31	25	1,089	1,018	51	20
Rochester.....	16,803	15,207	1,544	52	8,485	7,682	774	29	8,318	7,525	770	23
Schenectady.....	6,568	6,085	467	16	3,357	3,129	217	11	3,211	2,956	250	5
Syracuse.....	10,674	9,921	666	86	5,440	5,050	348	42	5,234	4,871	318	44
Troy.....	5,900	5,649	215	36	2,959	2,841	105	13	2,941	2,808	110	23
Utica.....	6,056	5,473	554	29	3,054	2,747	292	15	3,002	2,726	262	14
Watertown.....	2,028	1,864	160	4	1,014	936	75	3	1,014	928	85	1
Yonkers.....	7,815	7,204	490	119	3,932	3,627	242	62	3,883	3,577	248	57

¹ Town and city coextensive.

FEDERAL STATISTICS OF CHILDREN.

TABLE 37.—CHILDREN 5 TO 9 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

CITY.	WHITE.			Negro.	BOYS.			GIRLS.				
	Total.	Foreign born.			Total.	White.		Total.	White.			
		Native.	Foreign born.			Native.	Foreign born.		Native.	Foreign born.		
MIDDLE ATLANTIC—continued.												
New Jersey:												
Atlantic City	3,500	2,827	166	505	1,743	1,430	74	239	1,757	1,397	98	299
Bayonne.....	6,373	5,744	579	48	3,213	2,903	299	30	3,160	2,841	300	28
Camden.....	8,824	7,978	335	509	4,458	4,027	168	293	4,366	3,951	167	247
East Orange.....	2,652	2,442	51	159	1,248	1,242	24	53	1,304	1,200	27	77
Elizabeth.....	7,267	6,451	679	137	3,611	3,201	343	67	3,655	3,250	336	70
Hoboken.....	6,673	5,968	699	6	3,337	2,982	352	3	3,336	2,986	347	3
Jersey City.....	26,865	24,919	1,490	455	13,595	12,604	773	216	13,270	12,313	717	299
Newark.....	33,074	29,001	3,355	712	16,004	14,563	1,676	363	16,470	14,438	1,679	349
Orange.....	2,921	2,583	132	206	1,465	1,292	71	102	1,456	1,291	61	104
Passaic.....	5,272	4,478	758	36	2,699	2,234	383	29	2,693	2,244	375	14
Paterson.....	12,237	10,919	1,197	120	6,105	5,429	610	66	6,123	5,490	557	54
Perth Amboy.....	3,472	3,096	362	14	1,725	1,534	188	3	1,747	1,563	174	11
Trenton.....	8,560	7,712	722	126	4,275	3,865	357	53	4,285	3,847	365	73
West Hoboken town.....	3,628	3,257	365	5	1,784	1,605	179	.....	1,844	1,652	186	8
Pennsylvania:												
Allentown.....	4,595	4,452	136	7	2,279	2,199	70	1	2,325	2,253	66	6
Altoona.....	4,827	4,627	168	32	2,408	2,302	88	11	2,419	2,315	80	21
Chester.....	3,386	2,856	141	399	1,697	1,453	67	177	1,689	1,498	74	212
Easton.....	2,313	2,209	81	23	1,188	1,134	43	11	1,125	1,075	38	12
Erie.....	6,382	6,036	320	26	3,111	2,983	165	13	3,271	3,108	155	13
Harrisburg.....	5,033	4,590	135	308	2,534	2,321	62	151	2,499	2,299	73	167
Hazleton.....	2,990	2,872	118	.....	1,467	1,413	54	.....	1,523	1,466	64	.....
Johnstown.....	5,303	4,882	390	31	2,704	2,465	219	20	2,599	2,417	171	11
Lancaster.....	3,983	3,885	49	49	1,979	1,916	32	22	2,013	1,909	17	27
McKeesport.....	4,534	4,163	290	81	2,274	2,070	159	45	2,260	2,098	131	36
New Castle.....	3,417	3,177	198	42	1,664	1,568	97	19	1,733	1,609	101	23
Norristown.....	2,128	1,911	107	110	1,073	970	51	52	1,055	941	54	55
Philadelphia.....	134,955	118,563	10,728	5,623	67,569	59,449	5,386	2,716	67,396	59,134	5,343	2,997

Swanton.....	13, 643	12, 840	739	43	6, 778	6, 363	391	23	6, 880	6, 437	368	25
Shenandoah.....	3, 085	2, 877	207	1	1, 520	1, 424	95	1	1, 565	1, 453	112	.....
Wilkes-Barre.....	6, 946	6, 513	379	54	3, 550	3, 335	190	25	3, 396	3, 178	189	29
Williamsport.....	2, 630	2, 497	44	89	1, 311	1, 241	24	46	1, 319	1, 256	20	45
York.....	3, 979	3, 833	35	111	1, 933	1, 861	22	49	2, 047	1, 972	13	62
EAST NORTH CENTRAL.												
Ohio:												
Akron.....	5, 385	5, 028	313	44	2, 091	2, 518	151	22	2, 694	2, 510	162	22
Canton.....	4, 112	3, 915	178	19	2, 080	1, 931	88	11	2, 082	1, 984	90	8
Cincinnati.....	26, 406	24, 357	1, 021	1, 029	13, 171	12, 177	511	482	13, 237	12, 180	519	547
Cleveland.....	50, 420	44, 538	5, 423	453	25, 267	22, 362	2, 694	218	25, 163	22, 176	2, 738	235
Columbus.....	13, 507	12, 382	338	784	6, 764	6, 227	171	365	6, 743	6, 155	167	419
Dayton.....	9, 265	8, 618	322	325	4, 637	4, 313	165	159	4, 628	4, 305	157	166
Hamilton.....	3, 174	3, 065	53	56	1, 600	1, 547	27	26	1, 574	1, 518	26	30
Lima.....	2, 734	2, 611	31	93	1, 417	1, 355	15	47	1, 317	1, 256	16	45
Lorain.....	3, 012	2, 590	387	35	1, 460	1, 245	197	18	1, 552	1, 345	190	17
Newark.....	2, 108	2, 049	36	23	1, 083	1, 054	18	11	1, 025	995	18	12
Springfield.....	3, 798	3, 370	19	409	1, 967	1, 750	8	209	1, 831	1, 620	11	200
Toledo.....	14, 844	14, 058	670	114	7, 473	7, 076	340	55	7, 371	6, 982	330	59
Youngstown.....	7, 072	6, 337	581	154	3, 484	3, 118	288	78	3, 588	3, 219	293	76
Zanesville.....	2, 246	2, 097	21	128	1, 113	1, 043	13	57	1, 133	1, 054	8	71
Indiana:												
Evansville.....	5, 784	5, 316	19	449	2, 947	2, 616	11	220	2, 987	2, 700	8	229
Fort Wayne.....	5, 376	5, 258	79	38	2, 640	2, 577	41	22	2, 736	2, 681	38	16
Indianapolis.....	18, 078	16, 285	268	1, 523	8, 998	8, 104	123	761	9, 080	8, 181	136	762
South Bend.....	4, 952	4, 471	439	36	2, 468	2, 222	227	14	2, 484	2, 249	212	22
Terre Haute.....	4, 995	4, 734	47	214	2, 592	2, 452	29	111	2, 403	2, 282	18	103
Illinois:												
Aurora.....	2, 439	2, 309	104	26	1, 238	1, 185	48	5	1, 201	1, 124	56	21
Bloomington.....	1, 896	1, 780	47	59	931	884	22	25	965	906	25	34
Chicago.....	191, 294	171, 235	17, 883	2, 147	96, 134	85, 980	9, 106	1, 033	95, 160	85, 255	8, 777	1, 114
Danville.....	2, 573	2, 456	12	105	1, 270	1, 209	5	56	1, 303	1, 247	7	49
Decatur.....	2, 659	2, 538	61	60	1, 304	1, 242	29	33	1, 355	1, 286	32	27
East St. Louis.....	5, 216	4, 510	228	478	2, 653	2, 315	118	220	2, 563	2, 195	110	258
Elgin.....	1, 945	1, 864	72	9	1, 019	974	40	5	926	890	32	4
Joliet.....	3, 236	3, 003	206	26	1, 646	1, 524	107	15	1, 560	1, 479	99	11
Peoria.....	5, 002	4, 803	95	104	2, 513	2, 406	47	60	2, 489	2, 397	48	44
Quincy.....	2, 813	2, 701	16	96	1, 394	1, 334	6	54	1, 419	1, 367	10	42
Rockford.....	3, 734	3, 453	273	8	1, 877	1, 738	135	4	1, 857	1, 715	138	4
Springfield.....	4, 654	4, 260	175	219	2, 335	2, 148	91	96	2, 319	2, 112	84	123

TABLE 37.—CHILDREN 5 TO 9 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

FEDERAL STATISTICS OF CHILDREN.

CITY.	WHITE.			Negro.	BOYS.				Total.	GIRLS.			Total.	
	Total.	Foreign born.			Total.	White.		Negro.		Total.	White.			Negro.
		Native.	Foreign born.			Native.	Foreign born.				Native.	Foreign born.		
EAST NORTH CENTRAL—continued.														
Michigan:														
Battle Creek.....	1,774	1,699	41	574	841	15	18	900	838	26	16			
Bay City.....	4,702	4,502	191	2,390	2,282	108	5	2,312	2,220	88	4			
Detroit.....	40,488	36,180	3,980	20,231	18,078	1,983	166	20,267	18,102	1,977	177			
Flint.....	2,642	2,460	153	1,288	1,213	60	15	1,354	1,247	93	14			
Grand Rapids.....	9,901	9,205	649	4,924	4,591	311	21	4,977	4,614	338	24			
Jackson.....	2,439	2,358	62	1,218	1,179	32	7	1,221	1,179	30	12			
Kalamazoo.....	2,893	2,633	211	1,460	1,335	100	25	1,433	1,298	111	24			
Lansing.....	2,149	2,064	55	1,041	995	24	22	1,108	1,069	31	14			
Saginaw.....	4,321	4,100	202	2,194	2,081	101	12	2,127	2,019	101	7			
Wisconsin:														
Green Bay.....	2,689	2,637	37	1,298	1,267	21	1	1,396	1,370	16	3			
La Crosse.....	2,619	2,577	37	1,312	1,291	18	3	1,307	1,286	19	2			
Madison.....	1,956	1,880	63	1,008	962	32	8	963	918	31	4			
Milwaukee.....	33,721	31,213	2,463	16,784	15,513	1,260	11	16,987	15,700	1,208	23			
Oshkosh.....	3,109	2,983	117	1,550	1,498	47	4	1,599	1,485	70	4			
Racine.....	3,332	3,042	285	1,656	1,490	164	2	1,676	1,552	121	3			
Sheboygan.....	2,521	2,280	240	1,258	1,134	123	1	1,263	1,146	117	.....		
Superior.....	4,106	3,787	294	2,134	1,976	150	4	1,972	1,811	144	3			
WEST NORTH CENTRAL.														
Minnesota:														
Duluth.....	6,734	6,197	525	3,443	3,173	265	4	3,291	3,024	260	7			
Minneapolis.....	22,085	20,575	1,392	11,187	10,463	672	61	10,898	10,122	720	54			
St. Paul.....	17,485	16,416	928	8,789	8,261	459	68	8,696	8,155	469	73			
Iowa:														
Cedar Rapids.....	2,645	2,514	116	1,302	1,232	62	8	1,343	1,282	54	7			
Clinton.....	2,221	2,120	30	1,108	1,045	16	47	1,113	1,075	14	24			
Council Bluffs.....	2,668	2,593	53	1,355	1,315	30	11	1,312	1,278	23	11			
Davenport.....	3,489	3,376	69	1,768	1,723	46	24	1,696	1,653	23	19			

Des Moines.....	7,384	6,960	201	262	3,714	3,502	103	108	3,670	3,448	98	124
Dubuque.....	3,218	3,177	34	7	1,607	1,585	19	3	1,611	1,592	15	4
Sioux City.....	3,852	6,615	211	26	1,929	1,802	116	11	1,923	1,813	95	15
Waterloo.....	2,189	2,145	44	.....	1,069	1,045	24	.....	1,120	1,100	20	.....
Missouri:												
Joplin.....	3,176	3,120	9	47	1,561	1,531	8	22	1,615	1,589	1	25
Kansas City.....	17,159	15,415	548	1,189	8,641	7,786	267	565	8,518	7,629	261	624
St. Joseph.....	6,210	5,774	162	274	3,124	2,908	77	144	3,086	2,871	85	130
St. Louis.....	54,667	49,277	2,786	2,588	27,077	24,432	1,390	1,243	27,590	24,845	1,396	1,345
Springfield.....	3,156	2,978	1	177	1,584	1,490	.....	94	1,572	1,488	1	83
Nebraska:												
Lincoln.....	3,535	3,137	349	49	1,782	1,578	173	31	1,753	1,559	176	18
Omaha.....	9,535	8,739	554	269	4,782	4,390	269	121	4,753	4,349	285	118
South Omaha.....	2,737	2,462	215	60	1,423	1,267	122	34	1,314	1,195	93	26
Kansas:												
Kansas City.....	7,595	6,633	185	769	3,753	3,271	100	381	3,842	3,367	85	388
Topeka.....	3,419	2,943	87	389	1,717	1,491	43	183	1,702	1,452	44	206
Wichita.....	4,129	3,877	42	210	2,005	1,889	20	96	2,124	1,988	22	114
SOUTH ATLANTIC.												
Delaware:												
Wilmington.....	7,521	6,540	274	706	3,719	3,264	127	328	3,802	3,276	147	378
Maryland:												
Baltimore.....	49,617	41,035	2,164	6,416	24,739	20,586	1,093	3,060	24,878	20,449	1,071	3,356
District of Columbia:												
Washington ¹	25,312	17,652	457	7,192	12,066	8,929	237	3,494	12,646	8,723	220	3,698
Virginia:												
Lynchburg.....	2,684	1,846	6	831	1,372	928	1	442	1,312	918	5	389
Norfolk.....	5,830	3,738	120	1,972	2,807	1,811	51	945	3,023	1,927	69	1,027
Portsmouth.....	3,073	1,935	30	1,106	1,568	1,015	12	541	1,505	920	18	567
Richmond.....	10,885	6,948	99	3,838	5,359	3,491	43	1,825	5,526	3,457	56	2,013
Roanoke.....	3,379	2,608	15	756	1,648	1,280	10	358	1,731	1,328	5	398
West Virginia:												
Huntington.....	3,147	2,957	9	181	1,560	1,471	5	84	1,587	1,486	4	97
Wheeling.....	3,553	3,424	60	69	1,775	1,706	36	33	1,778	1,718	24	36
North Carolina:												
Charlotte.....	3,481	2,244	19	1,218	1,689	1,089	9	591	1,792	1,155	10	627
Wilmington.....	2,438	1,232	7	1,199	1,226	617	5	604	1,212	615	2	595
South Carolina:												
Charleston.....	5,427	2,413	25	2,989	2,635	1,236	14	1,385	2,792	1,177	11	1,604
Columbia.....	2,331	1,285	12	1,024	1,124	643	5	476	1,207	652	7	548

¹ Population is for the District of Columbia, with which the city is coextensive.

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TABLE 37.—CHILDREN 5 TO 9 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

FEDERAL STATISTICS OF CHILDREN.

CITY.	WHITE.			Negro.	BOYS.			GIRLS.				
	Total.	Foreign born.			Total.	White.		Negro.	Total.	White.		Negro.
		Native.	Foreign born.			Native.	Foreign born.			Native.	Foreign born.	
SOUTH ATLANTIC—continued.												
Georgia:												
Atlanta.....	13,721	9,310	124	4,284	6,945	4,759	69	2,116	6,776	4,551	55	2,168
Augusta.....	3,472	2,023	13	1,384	1,707	1,067	5	694	1,716	1,016	8	690
Macon.....	3,713	2,064	20	1,629	1,845	1,046	6	798	1,868	1,018	14	836
Savannah.....	5,696	2,846	69	2,781	2,734	1,429	41	1,264	2,962	1,417	28	1,517
Florida:												
Jacksonville.....	4,486	2,165	42	2,273	2,256	1,108	19	1,131	2,230	1,062	23	1,142
Tampa.....	3,870	2,593	492	784	1,963	1,316	269	377	1,917	1,277	232	497
EAST SOUTH CENTRAL.												
Kentucky:												
Covington.....	4,523	4,341	15	167	2,216	2,126	10	86	2,307	2,221	5	81
Lexington.....	2,543	1,800	8	740	1,289	909	4	385	1,259	900	4	355
Louisville.....	18,270	15,571	179	2,520	9,118	7,767	85	1,266	9,182	7,804	94	1,254
Newport.....	2,566	2,463	58	45	1,311	1,253	35	23	1,255	1,210	23	22
Tennessee:												
Chattanooga.....	3,603	2,117	40	1,446	1,799	1,073	19	707	1,894	1,044	21	739
Knoxville.....	3,054	2,495	20	539	1,491	1,241	8	242	1,568	1,254	12	297
Memphis.....	10,044	6,173	133	3,736	4,873	3,004	82	1,787	5,171	3,169	51	1,949
Nashville.....	9,731	6,783	64	2,884	4,920	3,471	32	1,417	4,811	3,312	32	1,467
Alabama:												
Birmingham.....	12,863	8,161	179	4,513	6,467	4,173	97	2,196	6,386	3,969	83	2,316
Mobile.....	4,666	2,661	38	1,957	2,263	1,297	14	962	2,393	1,374	24	996
Montgomery.....	3,346	1,686	16	1,643	1,652	896	8	777	1,694	829	8	866
WEST SOUTH CENTRAL.												
Arkansas:												
Little Rock.....	3,851	2,706	17	1,127	1,923	1,366	8	559	1,923	1,350	9	563

Louisiana:	32,030	23,722	477	7,824	15,945	11,921	214	3,806	16,085	11,801	263	4,018
New Orleans.....	2,627	1,210	16	1,401	1,350	631	7	712	1,277	579	9	689
Shreveport.....												
Oklahoma:												
Muskogee.....	2,223	1,380		815	1,142	721		409	1,081	659		408
Oklahoma City.....	5,024	4,437	26	558	2,460	2,156	12	291	2,564	2,281	14	267
Texas:												
Austin.....	2,713	1,891	25	798	1,369	999	12	388	1,344	922	13	408
Dallas.....	7,971	6,526	102	1,340	3,974	3,299	49	683	3,997	3,287	53	657
El Paso.....	4,126	2,941	1,073	1,112	2,046	1,472	511	63	2,080	1,469	592	49
Fort Worth.....	6,864	5,596	86	1,182	3,377	2,766	49	562	3,457	2,890	37	620
Galveston.....	3,224	2,512	126	586	1,610	1,258	62	299	1,614	1,254	64	296
Houston.....	6,706	4,625	119	1,959	3,376	2,340	61	962	3,339	2,275	58	997
San Antonio.....	9,529	7,844	754	1,928	4,895	4,068	368	468	4,634	3,786	286	469
Waco.....	2,665	2,679	33	553	1,285	996	17	273	1,380	1,084	16	280
MONTAIN.												
Montana:												
Butte.....	3,066	2,923	128	9	1,529	1,461	61	5	1,537	1,461	67	4
Colorado:												
Colorado Springs.....	2,307	2,184	34	89	1,144	1,063	14	47	1,163	1,101	29	42
Denver.....	16,176	15,170	693	299	8,104	7,622	337	138	8,072	7,548	356	161
Pueblo.....	3,922	3,654	156	111	1,946	1,826	69	51	1,976	1,828	87	60
Utah:												
Ogden.....	2,655	2,524	112	11	1,336	1,266	59	7	1,319	1,258	53	4
Salt Lake City.....	8,794	8,372	387	30	4,412	4,189	206	14	4,382	4,183	182	16
PACIFIC.												
Washington:												
Seattle.....	15,123	13,896	1,043	72	7,617	6,977	542	38	7,506	6,918	501	34
Spokane.....	7,807	7,394	382	27	3,923	3,714	192	16	3,884	3,690	190	12
Tacoma.....	6,448	5,949	449	32	3,248	2,994	225	9	3,209	2,955	214	23
Oregon:												
Portland.....	12,403	11,379	898	42	6,240	5,783	496	22	6,163	5,646	457	20
California:												
Los Angeles.....	20,518	18,500	1,383	515	10,206	9,201	704	243	10,313	9,299	679	272
Oakland.....	10,675	9,714	595	183	5,325	4,823	301	97	5,350	4,891	294	86
San Francisco.....	24,908	22,809	1,640	61	12,522	11,410	882	34	12,386	11,399	758	27
Berkeley.....	2,844	2,686	108	21	1,385	1,311	47	12	1,459	1,375	61	9
Pasadena.....	1,998	1,872	65	53	984	917	34	31	1,009	955	31	22
Sacramento.....	2,643	2,446	100	24	1,339	1,234	51	12	1,304	1,212	49	12
San Diego.....	2,589	2,387	169	27	1,327	1,213	102	10	1,262	1,174	67	17
San Jose.....	2,062	1,939	91	10	1,029	963	51	4	1,033	976	40	6

TABLE 38.—CHILDREN 10 TO 14 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910.

FEDERAL STATISTICS OF CHILDREN.

CITY.	Total.	WHITE.		Negro.	BOYS.				GIRLS.			
		Native.	Foreign born.		Total.	White.		Negro.	Total.	White.		Negro.
						Native.	Foreign born.			Native.	Foreign born.	
NEW ENGLAND.												
Maine:	2,461	1,967	491	3	1,253	991	242	1,228	976	3		
Lewiston.....	4,344	4,067	255	21	2,106	1,978	117	2,238	2,069	11		
Portland.....												
New Hampshire:	6,382	5,146	1,231	5	3,038	2,498	592	3,289	2,648	2		
Manchester.....	2,262	1,938	324	.....	1,160	991	169	1,102	947	.....	
Nashua.....												
Massachusetts:	55,316	47,723	6,748	826	27,593	23,764	3,444	27,726	23,969	455		
Boston.....	4,647	4,225	374	48	2,310	2,117	169	2,337	2,108	24		
Brockton.....	1,825	1,765	54	6	906	880	26	919	885	5		
Brookline town.....	8,892	7,630	838	423	4,383	3,787	393	4,509	3,843	220		
Cambridge.....	2,857	2,129	699	28	1,415	1,073	331	1,442	1,057	16		
Chelsea.....												
Chicopee.....	2,271	2,012	269	.....	1,139	1,008	136	1,132	1,009	.....	
Everett.....	3,164	2,840	236	88	1,600	1,434	169	1,564	1,406	31		
Fall River.....	11,796	9,712	2,062	19	5,956	4,892	1,056	5,899	4,820	13		
Fitchburg.....	3,429	3,019	407	3	1,681	1,486	194	1,748	1,533	2		
Haverhill.....	3,544	3,266	249	29	1,762	1,627	121	1,782	1,669	15		
Holyoke.....	5,723	4,965	757	1	2,345	2,115	329	2,878	2,450	.....	
Lawrence.....	7,335	5,832	1,499	14	3,587	2,831	738	3,748	3,001	11		
Lowell.....	8,656	7,466	1,186	4	4,279	3,682	594	4,377	3,784	1		
Lynn.....	6,635	5,862	713	60	3,205	2,871	339	3,370	2,991	25		
Malden.....	4,171	3,684	431	56	2,081	1,838	217	2,090	1,846	30		
New Bedford.....	8,296	6,302	1,811	182	4,048	3,077	893	4,248	3,235	104		
Newton.....	3,290	3,051	200	37	1,648	1,529	99	1,642	1,522	19		
Pittsfield.....	2,513	2,331	186	26	1,263	1,181	69	1,280	1,180	13		
Quincy.....	3,022	2,709	311	1	1,505	1,351	153	1,517	1,358	1		
Salem.....	3,770	3,364	396	9	1,890	1,667	199	1,940	1,737	5		
Somerville.....	6,233	5,925	335	23	3,205	2,992	204	3,127	2,983	13		
Springfield.....	6,965	6,281	609	122	3,473	3,128	290	3,493	3,108	70		

Taunton.....	2,849	2,559	267	28	1,403	1,272	124	7	1,446	1,287	143	16
Waltham.....	2,344	2,160	161	13	1,220	1,131	78	10	1,124	1,038	83	3
Worcester.....	12,037	10,773	1,174	88	5,928	5,205	598	34	6,109	5,478	576	54
Rhode Island:												
Newport.....	1,967	1,803	80	103	983	904	34	45	1,004	899	46	58
Pawtucket.....	4,819	4,233	562	24	2,440	2,160	268	12	2,379	2,073	294	12
Providence.....	18,305	15,800	2,539	363	9,121	7,644	1,291	175	9,184	7,716	1,248	208
Warwick town.....	2,609	2,233	362	13	1,247	1,074	168	4	1,362	1,159	194	9
Woonsocket.....	3,730	2,886	842	2	1,805	1,384	420	1	1,925	1,502	422	1
Connecticut:												
Bridgport ¹	8,260	7,201	984	75	4,086	3,582	475	29	4,174	3,619	509	46
Hartford ¹	7,955	6,864	989	152	3,960	3,407	473	80	3,905	3,457	466	72
Meriden town.....	3,027	2,795	215	17	1,622	1,496	115	11	1,405	1,299	100	6
Meriden city.....	2,551	2,341	193	17	1,403	1,284	108	11	1,148	1,057	85	6
New Britain ¹	3,699	3,238	453	8	1,842	1,599	240	3	1,857	1,639	213	5
New Haven ¹												
New Haven ¹	11,803	10,075	1,491	236	5,975	5,077	783	114	5,828	4,998	708	122
Norwich town.....	2,472	2,146	277	48	1,192	1,069	131	21	1,280	1,107	146	27
Stamford town.....	2,358	2,041	297	20	1,195	1,029	154	12	1,163	1,012	143	8
Stamford city.....	2,098	1,792	286	20	1,064	904	148	12	1,034	888	138	8
Waterbury ¹	6,437	5,704	675	58	3,201	2,848	321	32	3,236	2,856	354	26
MIDDLE ATLANTIC.												
New York:												
Albany.....	7,498	7,088	346	64	3,757	3,540	187	30	3,741	3,548	159	34
Amsterdam.....	2,323	2,028	287	8	1,170	1,024	142	4	1,153	1,004	145	4
Auburn.....	2,303	2,139	134	30	1,162	1,082	68	12	1,141	1,057	66	18
Binghamton.....	3,377	3,177	162	36	1,664	1,578	71	15	1,713	1,599	91	21
Buffalo.....	39,137	36,316	2,709	109	19,408	17,905	1,356	54	19,729	18,321	1,353	55
Elmira.....	2,694	2,579	89	26	1,344	1,287	39	18	1,350	1,292	50	8
Jamestown.....												
Jamestown.....	2,452	2,183	257	12	1,240	1,095	141	4	1,212	1,088	116	8
Kingston.....	2,254	2,124	75	55	1,084	1,029	32	23	1,170	1,095	43	32
Mount Vernon.....	2,840	2,589	211	39	1,408	1,293	97	17	1,432	1,296	114	22
New Rochelle.....	2,539	2,183	238	118	1,242	1,058	125	59	1,297	1,125	113	59
New York City.....	422,431	340,156	77,334	4,858	210,598	169,752	38,553	2,246	211,833	170,404	38,781	2,612
Newburgh.....												
Newburgh.....	2,381	2,254	82	45	1,171	1,101	40	30	1,210	1,153	42	15
Niagara Falls.....	2,275	1,849	415	11	1,143	917	220	6	1,132	932	195	5
Poughkeepsie.....	2,001	1,881	79	41	993	930	42	21	1,008	951	37	20
Rochester.....	17,100	15,423	1,618	57	8,596	7,740	830	25	8,504	7,683	788	32
Schenectady.....	5,554	4,958	576	20	2,803	2,496	297	10	2,751	2,462	279	10
Syracuse.....												
Syracuse.....	10,724	9,954	709	60	5,340	4,949	366	24	5,384	5,005	343	36
Troy.....	6,062	5,747	275	40	2,985	2,846	121	18	3,077	2,901	154	22
Utica.....	6,037	5,176	831	30	3,099	2,652	431	16	2,938	2,524	400	14
Watertown.....	2,009	1,777	226	6	983	878	104	1	1,026	899	122	5
Yonkers.....	7,214	6,532	595	87	3,635	3,295	296	44	3,579	3,237	299	43

¹ Town and city coextensive.

TABLE 38.—CHILDREN 10 TO 14 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

FEDERAL STATISTICS OF CHILDREN.

CITY.	WHITE.			Negro.	BOYS.			GIRLS.			
	Total.	Foreign born.			Total.	White.		Negro.	Total.	White.	
		Native.	Foreign born.			Native.	Foreign born.			Native.	Foreign born.
MIDDLE ATLANTIC—continued.											
New Jersey:											
Atlantic City.....	3, 221	2, 528	190	563	1, 575	1, 240	104	231	1, 046	86	
Bayonne.....	5, 469	4, 715	704	50	2, 787	2, 376	385	26	2, 652	319	
Camden.....	8, 106	7, 193	445	464	3, 938	3, 496	232	216	4, 168	213	
East Orange.....	2, 506	2, 285	87	124	1, 236	1, 135	34	67	1, 270	53	
Elizabeth.....	6, 506	5, 739	651	116	3, 217	2, 861	304	52	3, 269	347	
Hoboken.....	6, 742	5, 884	841	17	3, 299	2, 942	438	9	3, 253	403	
Jersey City.....	25, 533	23, 305	1, 821	407	12, 753	11, 627	927	199	12, 780	894	
Newark.....	31, 323	26, 676	4, 014	626	15, 474	13, 190	2, 008	272	15, 849	2, 006	
Orange.....	2, 608	2, 199	195	214	1, 272	1, 066	103	103	1, 336	92	
Pasaden.....	4, 470	3, 351	1, 079	40	2, 223	1, 683	514	16	2, 247	565	
Paterson.....	11, 722	10, 068	1, 529	123	5, 908	5, 044	786	76	5, 814	743	
Perth Amboy.....	2, 973	2, 466	494	13	1, 466	1, 229	235	2	1, 507	259	
Trenton.....	8, 304	7, 296	866	142	4, 124	3, 616	450	68	4, 170	416	
West Hoboken town.....	3, 529	3, 018	506	4	1, 747	1, 495	251	.....	1, 782	255
Pennsylvania:											
Allentown.....	4, 184	4, 015	161	8	2, 091	2, 003	83	5	2, 093	78	
Altoona.....	4, 701	4, 519	144	38	2, 226	2, 145	66	15	2, 475	78	
Chester.....	3, 230	2, 692	136	402	1, 552	1, 311	70	171	1, 678	66	
Easton.....	2, 239	2, 129	86	24	1, 110	1, 048	46	16	1, 129	40	
Erie.....	6, 010	5, 665	324	21	3, 011	2, 836	164	11	2, 999	160	
Harrisburg.....	5, 021	4, 526	161	234	2, 454	2, 212	81	161	2, 567	80	
Hazleton.....	2, 780	2, 603	175	2	1, 261	1, 277	83	1	1, 419	92	
Johnstown.....	4, 464	4, 068	374	22	2, 184	1, 978	199	7	2, 280	175	
Lancaster.....	3, 950	3, 800	67	83	1, 944	1, 867	38	29	2, 006	29	
McKeesport.....	4, 286	3, 861	350	75	2, 132	1, 904	191	37	2, 154	159	
New Castle.....	2, 881	2, 609	240	32	1, 436	1, 204	114	18	1, 445	126	
Norristown.....	2, 054	1, 851	118	85	969	870	63	26	1, 085	55	

Philadelphia.....	131,084	112,571	13,288	5,207	66,384	56,408	6,575	2,348	66,760	56,168	6,713	2,859
Pittsburgh.....	46,302	40,879	3,665	1,843	23,038	20,352	1,811	2,871	23,264	20,827	1,854	972
Reading.....	8,667	7,779	234	54	4,065	3,983	309	23	4,082	3,846	125	31
Scranton.....	12,603	11,660	903	40	6,215	5,739	453	23	6,388	5,921	450	17
Shenandoah.....	2,567	2,348	218	1	1,260	1,144	116	.....	1,307	1,204	102	1
Wilkes-Barre.....	6,527	6,112	349	66	3,396	3,089	284	33	3,221	3,023	165	23
Williamsport.....	2,754	2,680	84	90	1,372	1,308	18	46	1,322	1,222	16	44
York.....	3,869	3,796	30	103	1,919	1,865	13	41	1,960	1,871	17	62
EAST NORTH CENTRAL.												
Ohio:												
Akron.....	5,008	4,610	330	65	2,491	2,306	152	30	2,517	2,304	178	35
Canton.....	3,914	3,693	197	24	1,999	1,798	96	15	2,605	1,895	191	9
Cincinnati.....	29,417	27,212	989	1,214	14,960	13,554	515	991	14,757	13,653	474	623
Cleveland.....	47,061	40,492	6,078	465	23,390	20,194	3,085	247	23,671	20,388	3,943	238
Columbus.....	13,427	12,315	314	794	6,688	6,095	153	362	6,789	6,220	156	412
Dayton.....	8,678	8,104	262	291	4,262	3,999	124	138	4,416	4,105	158	153
Hamilton.....	3,143	3,055	39	48	1,515	1,473	22	20	1,628	1,582	17	28
Lima.....	2,622	2,519	82	71	1,281	1,221	15	45	1,341	1,268	17	26
Lorain.....	2,292	1,986	379	27	1,157	975	171	11	1,135	911	208	16
Newark.....	2,004	1,952	28	24	980	956	14	10	1,024	996	14	14
Springfield.....	3,718	3,305	24	268	1,863	1,668	11	163	1,855	1,667	13	265
Toledo.....	14,170	13,357	707	103	7,033	6,651	241	38	7,137	6,706	266	65
Youngstown.....	6,006	5,242	644	120	3,022	2,650	318	54	2,984	2,592	236	66
Zanesville.....	2,060	1,946	15	99	1,012	953	9	50	1,048	983	6	49
Indiana:												
Evansville.....	5,870	5,299	17	514	2,915	2,668	11	296	2,955	2,671	6	278
Fert Wayne.....	5,567	5,408	115	42	2,760	2,668	68	33	2,807	2,740	47	19
Indianapolis.....	17,563	15,769	375	1,823	8,680	7,796	150	724	8,888	7,973	125	789
South Bend.....	4,562	4,086	418	47	2,374	2,089	215	34	2,268	2,067	203	23
Terre Haute.....	4,928	4,691	44	193	2,421	2,314	25	82	2,507	2,377	19	111
Illinois:												
Aurora.....	2,439	2,325	85	29	1,165	1,121	32	12	1,274	1,204	53	17
Bloomington.....	2,046	1,988	36	72	1,030	981	18	31	1,066	1,007	18	41
Chicago.....	185,799	164,613	19,005	2,150	92,635	81,981	9,572	1,062	93,164	82,632	9,433	1,088
Danville.....	2,390	2,268	21	101	1,215	1,159	10	46	1,175	1,109	11	55
Decatur.....	2,629	2,516	55	58	1,317	1,268	21	28	1,312	1,248	34	30
East St. Louis.....	4,585	4,043	163	374	2,280	2,012	89	179	2,305	2,031	79	195
Elgin.....	2,121	2,032	78	11	1,033	994	32	7	1,088	1,068	46	4
Joliet.....	2,933	2,687	205	41	1,447	1,317	111	19	1,496	1,370	94	22
Peoria.....	5,246	5,090	113	103	2,626	2,515	64	47	2,620	2,515	49	56
Quincy.....	3,018	2,875	9	124	1,559	1,482	6	71	1,459	1,393	3	63
Rockford.....	3,730	3,502	217	11	1,844	1,719	120	5	1,886	1,783	97	6
Springfield.....	4,266	3,845	177	244	2,107	1,896	90	122	2,159	1,950	87	122

TABLE 38.—CHILDREN 10 TO 14 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

FEDERAL STATISTICS OF CHILDREN.

CITY.	Total.	WHITE.		Negro.	BOYS.			GIRLS.		
		Native.	Foreign born.		Total.	White.		Total.	White.	
						Native.	Foreign born.		Native.	Foreign born.	Negro.
EAST NORTH CENTRAL—continued.										
Michigan:										
Battle Creek.....	1,732	1,635	63	34	850	806	31	883	829	33
Bay City.....	4,325	4,113	202	8	2,164	2,076	86	2,161	2,087	116
Detroit.....	37,170	32,684	4,139	342	18,496	16,235	2,081	18,674	16,449	2,058
Flint.....	2,207	2,035	143	29	1,068	981	66	1,144	1,064	77
Grand Rapids.....	9,286	8,569	688	29	4,665	4,318	331	4,621	4,261	357
Jackson.....	2,185	2,092	71	22	1,089	1,026	35	1,116	1,066	36
Kalamazoo.....	2,785	2,521	222	42	1,355	1,228	101	1,480	1,298	121
Lansing.....	2,362	2,259	69	34	1,361	1,205	49	1,001	964	20
Saginaw.....	4,160	3,936	206	17	2,068	1,900	99	2,092	1,976	107
Wisconsin:										
Green Bay.....	2,504	2,459	36	1	1,274	1,246	23	1,280	1,213	13
La Crosse.....	2,928	2,869	49	10	1,448	1,423	23	1,480	1,446	26
Madison.....	1,989	1,892	85	11	947	903	39	1,042	969	46
Milwaukee.....	35,320	32,832	2,450	37	17,748	16,491	1,236	17,572	16,341	1,215
Oshkosh.....	3,117	2,958	153	6	1,582	1,465	85	1,565	1,493	68
Racine.....	3,325	3,040	276	9	1,690	1,565	121	1,686	1,475	155
Sheboygan.....	2,655	2,370	285	.....	1,360	1,204	156	1,295	1,166	159
Superior.....	3,562	3,231	311	6	1,806	1,680	161	1,787	1,601	180
Minnesota:										
Duluth.....	6,347	5,729	592	24	3,131	2,845	275	3,216	2,884	317
Minneapolis.....	22,476	20,801	1,537	136	11,196	10,357	775	11,268	10,444	763
St. Paul.....	17,599	16,441	1,009	149	8,856	8,236	626	8,774	8,215	484
Iowa:										
Cedar Rapids.....	2,633	2,513	106	15	1,269	1,249	61	1,324	1,273	44
Clinton.....	2,104	2,043	35	26	1,069	978	16	1,086	1,066	17
Council Bluffs.....	2,565	2,487	64	17	1,263	1,249	30	1,282	1,269	34
Des Moines.....	3,674	3,553	69	53	1,907	1,789	37	1,767	1,714	33

WEST NORTH CENTRAL.

Des Moines.....	6,851	6,440	211	200	3,353	3,139	119	95	3,498	3,301	92	105
Dubuque.....	3,335	3,285	42	8	1,628	1,611	13	4	1,707	1,674	29	4
Stoux City.....	3,905	3,686	200	19	1,935	1,821	104	10	1,970	1,865	96	9
Waterloo.....	2,007	1,979	28	.....	936	923	13	.....	1,071	1,056	15	.....
Missouri:												
Joplin.....	2,732	2,664	12	56	1,317	1,288	3	26	1,415	1,376	9	30
Kansas City.....	16,979	15,132	568	1,277	8,351	7,472	288	590	8,628	7,660	280	687
St. Joseph.....	6,043	5,606	159	276	2,934	2,716	81	136	3,109	2,890	78	140
St. Louis.....	56,216	50,631	2,886	2,680	27,898	25,157	1,440	1,203	28,318	25,474	1,446	1,387
Springfield.....	3,103	2,904	6	190	1,518	1,418	3	96	1,585	1,486	3	94
Nebraska:												
Lincoln.....	3,195	2,847	306	41	1,546	1,374	151	20	1,649	1,473	155	21
Omaha.....	9,300	8,559	539	202	4,614	4,261	261	92	4,686	4,298	278	110
South Omaha.....	2,497	2,265	197	45	1,227	1,109	97	21	1,270	1,146	100	24
Kansas:												
Kansas City.....	7,165	6,262	173	728	3,490	3,065	84	341	3,675	3,197	89	387
Topeka.....	3,296	2,828	87	383	1,606	1,380	40	186	1,692	1,448	47	197
Wichita.....	4,069	3,827	47	184	1,943	1,817	29	96	2,116	2,010	18	88
SOUTH ATLANTIC.												
Delaware:												
Wilmington.....	7,233	6,142	305	785	3,537	2,993	158	386	3,695	3,149	147	399
Maryland:												
Baltimore.....	48,507	39,838	2,512	6,151	23,564	19,556	1,246	2,759	24,943	20,282	1,266	3,392
District of Columbia:												
Washington ¹	24,049	16,893	526	7,211	12,151	8,492	263	3,384	12,498	8,401	263	3,827
Virginia:												
Lynchburg.....	2,043	1,748	9	886	1,285	878	3	404	1,358	870	6	482
Norfolk.....	5,405	3,443	122	1,839	2,650	1,731	62	856	2,755	1,712	60	983
Portsmouth.....	2,784	1,777	30	977	1,416	919	20	477	1,368	858	10	500
Richmond.....	10,933	6,923	122	3,888	5,395	3,442	59	1,894	5,538	3,481	63	1,994
Roanoke.....	3,326	2,514	22	790	1,663	1,275	13	375	1,663	1,239	9	415
West Virginia:												
Huntington.....	2,921	2,727	8	186	1,496	1,391	2	103	1,425	1,336	6	83
Wheeling.....	3,494	3,371	74	49	1,754	1,691	41	22	1,740	1,690	33	27
North Carolina:												
Charlotte.....	3,221	2,090	9	1,122	1,582	1,041	4	537	1,639	1,049	5	585
Wilmington.....	2,307	1,181	2	1,124	1,111	570	2	539	1,196	611	.....	585
South Carolina:												
Charleston.....	5,329	2,382	35	2,912	2,573	1,176	21	1,376	2,756	1,206	14	1,536
Columbia.....	2,269	1,186	24	1,059	1,112	587	16	509	1,157	599	8	550

¹ Population is for the District of Columbia, with which the city is coextensive.

TABLE 38.—CHILDREN 10 TO 14 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

FEDERAL STATISTICS OF CHILDREN.

CITY.	WHITE.			Negro.	BOYS.			GIRLS.				
	Total.	Foreign born.			Total.	White.		Total.	White.			
		Native.	Foreign born.			Native.	Foreign born.		Native.	Foreign born.		
SOUTH ATLANTIC—continued.												
Georgia:												
Atlanta.....	13,265	8,503	155	4,607	6,571	2,280	4,264	77	2,280	4,239	78	2,377
Augusta.....	3,438	1,818	13	1,006	1,643	740	894	9	740	924	4	866
Macon.....	3,798	2,056	22	1,720	1,809	789	1,011	9	789	1,045	13	931
Savannah.....	5,472	2,712	96	2,664	2,548	1,191	1,362	55	1,191	1,410	41	1,473
Florida:												
Jacksonville.....	4,350	1,970	61	2,316	2,152	1,133	976	41	1,133	994	20	1,183
Tampa.....	3,156	1,914	579	663	1,511	312	905	294	312	1,009	285	351
EAST SOUTH CENTRAL.												
Kentucky:												
Covington.....	4,662	4,458	9	195	2,261	100	2,156	5	100	2,302	4	95
Lexington.....	2,719	1,851	16	850	1,369	419	939	9	419	912	7	431
Louisville.....	19,148	16,021	208	2,919	9,361	1,374	7,898	89	1,374	8,123	119	1,545
Newport.....	2,664	2,559	59	46	1,363	17	1,316	30	17	1,243	29	29
Tennessee:												
Chattanooga.....	3,551	2,161	47	1,243	1,753	632	1,103	18	632	1,058	29	711
Knoxville.....	3,197	2,579	14	604	1,561	303	1,280	8	303	1,329	6	301
Memphis.....	9,461	5,817	185	3,454	4,554	1,626	2,836	91	1,626	2,961	94	1,538
Nashville.....	9,896	6,587	80	3,228	4,778	1,523	3,216	39	1,523	3,371	41	1,705
Alabama:												
Birmingham.....	11,471	6,882	193	4,396	5,635	2,096	3,427	102	2,096	3,455	91	2,300
Mobile.....	4,473	2,540	49	1,894	2,174	863	1,273	18	863	1,267	31	1,001
Montgomery.....	3,383	1,603	19	1,760	1,640	816	816	7	816	787	12	944
WEST SOUTH CENTRAL.												
Arkansas:												
Little Rock.....	3,443	2,382	17	1,044	1,663	498	1,183	8	498	1,200	9	546

Louisiana:	32,046	23,710	596	7,780	15,740	11,758	261	3,712	16,306	11,852	335	4,018
New Orleans.....	2,338	1,079	26	1,283	1,153	544	16	593	1,185	535	10	640
Shreveport.....												
Oklahoma:	1,964	1,227	6	706	958	578	4	349	1,026	649	2	357
Minutogee.....	4,332	3,867	35	457	2,145	1,900	16	229	2,187	1,957	19	228
Oklahoma City.....												
Texas:	2,854	2,080	32	741	1,387	1,036	17	333	1,467	1,044	15	408
Austin.....	7,350	5,910	110	1,339	3,571	2,874	57	640	3,779	3,036	53	689
Dallas.....	3,574	2,245	1,221	1,622	1,754	1,115	592	42	1,830	1,130	639	60
El Paso.....	5,924	4,822	92	1,010	2,924	2,390	51	453	3,000	2,452	41	527
Fert Worth.....												
Galveston.....	3,075	2,364	117	594	1,587	1,262	55	280	1,538	1,162	62	314
Houston.....	6,461	4,329	150	1,982	3,190	2,167	76	947	3,271	2,162	74	1,035
San Antonio.....	9,152	7,280	391	976	4,577	3,636	475	463	4,575	3,644	416	513
Waco.....	2,678	2,641	32	602	1,314	1,021	14	276	1,364	1,020	18	326
MONTAIN.												
Montana:	2,836	2,664	150	17	1,326	1,243	71	8	1,510	1,421	79	9
Butte.....												
Colorado:	2,327	2,170	52	104	1,120	1,044	24	51	1,297	1,126	28	53
Colorado Springs.....	16,328	15,147	883	333	8,189	7,553	485	164	8,189	7,594	398	169
Denver.....	3,328	3,027	199	102	1,639	1,489	103	47	1,639	1,538	96	55
Pueblo.....												
Utah:	2,478	2,342	126	7	1,230	1,164	61	5	1,248	1,178	65	2
Ogden.....	8,182	7,683	468	27	4,118	3,875	227	14	4,064	3,808	241	13
Salt Lake City.....												
PACIFIC.												
Washington:	14,491	13,288	1,002	98	7,195	6,364	339	47	7,296	6,669	553	46
Seattle.....	7,297	6,879	375	37	3,592	3,394	176	20	3,705	3,485	199	17
Spokane.....	6,237	5,694	461	41	3,119	2,843	238	19	3,118	2,851	223	22
Tacoma.....												
Oregon:	12,448	11,460	876	32	6,242	6,730	451	15	6,206	5,730	425	17
Portland.....												
California:	20,999	18,728	1,643	537	10,420	9,300	809	253	10,579	9,428	834	284
Los Angeles.....	10,468	9,477	664	131	5,124	4,639	319	53	5,344	4,838	345	78
Oakland.....	24,822	22,358	1,919	65	12,379	11,076	952	28	12,443	11,282	967	37
San Francisco.....	3,095	2,886	148	25	1,546	1,447	67	10	1,549	1,459	81	15
Berkeley.....												
Pasadena.....	2,116	1,985	73	56	999	946	27	25	1,117	1,039	46	31
Sacramento.....	2,733	2,523	121	27	1,386	1,270	64	11	1,247	1,252	57	16
San Diego.....	2,699	2,452	200	34	1,330	1,215	88	17	1,369	1,237	112	17
San Jose.....	2,117	1,970	126	6	1,036	957	65	4	1,091	1,013	61	2

FEDERAL STATISTICS OF CHILDREN.

TABLE 39.—CHILDREN 15 TO 19 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910.

CITY.	Total.	WHITE.		Negro.	BOYS.			GIRLS.			
		WHITE.			Total.	White.		Total.	White.		
		Native.	Foreign born.			Native.	Foreign born.				
									Native.	Foreign born.	Native.	Foreign born.
NEW ENGLAND.											
Maine:											
Lewiston.....	2,765	1,859	897	9	1,287	884	400	3	975	497	6
Portland.....	4,945	4,291	626	28	2,363	2,062	290	11	2,229	336	17
New Hampshire:											
Manchester.....	7,787	4,629	3,155	3	3,941	2,303	1,636	2	2,326	1,519	1
Nashua.....	2,687	1,781	906	.....	1,394	963	531	.....	918	375	.....
Massachusetts:											
Boston.....	55,866	42,587	12,433	805	27,074	20,905	5,794	336	21,682	6,639	489
Brockton.....	5,031	4,211	770	50	2,515	2,105	389	21	2,106	381	29
Brookline town.....	2,029	1,720	300	8	864	796	65	2	924	235	6
Cambridge.....	8,930	6,967	1,558	402	4,300	3,439	688	171	3,528	870	231
Chelsea.....	2,991	1,933	1,032	24	1,428	951	466	9	982	566	15
Chicopee.....	2,575	1,638	936	1	1,205	827	377	1	811	559	.....
Everett.....	3,038	2,565	401	71	1,498	1,255	207	35	1,310	194	36
Fall River.....	12,096	7,998	4,074	19	5,735	3,898	1,829	5	4,100	2,245	14
Fitchburg.....	3,665	2,746	915	2	1,827	1,378	447	.....	1,368	468	2
Haverhill.....	3,928	3,126	768	33	1,962	1,513	431	17	1,613	337	16
Holyoke.....	6,112	4,502	1,601	8	2,918	2,203	712	2	2,299	889	6
Lawrence.....	8,205	4,823	3,364	17	3,949	2,386	1,550	12	2,437	1,814	5
Lowell.....	10,157	7,098	3,041	15	4,941	3,439	1,492	7	3,659	1,549	8
Lynn.....	7,572	5,861	1,633	68	3,783	2,919	816	38	2,942	817	30
Malden.....	4,009	3,287	687	35	1,932	1,609	307	16	1,678	380	19
New Bedford.....	9,362	5,457	3,685	217	4,613	2,756	1,733	122	2,701	1,952	95
Newton.....	3,487	2,780	665	40	1,628	1,205	312	19	1,485	353	21
Pittsfield.....	2,814	2,471	323	20	1,392	1,206	175	11	1,265	148	9
Quincy.....	2,926	2,411	507	7	1,506	1,221	282	2	1,190	225	5
Salem.....	3,942	2,990	940	9	1,961	1,501	455	3	1,499	485	6
Somerville.....	6,174	5,383	770	21	2,948	2,573	365	10	2,810	405	11
Springfield.....	7,796	6,267	1,404	134	3,765	3,021	684	59	3,296	720	73

Taunton.....	3,035	2,434	578	23	1,473	1,199	269	15	1,502	1,235	319	8
Waltham.....	2,626	2,246	370	9	1,233	1,064	166	3	1,392	1,182	204	6
Worcester.....	12,968	10,410	2,465	92	6,464	5,143	1,277	43	6,504	5,267	1,188	49
Rhode Island:												
Newport.....	3,642	3,305	225	111	2,596	2,409	135	52	1,046	896	90	59
Pawtucket.....	4,978	3,887	1,066	28	2,529	1,976	542	9	2,449	1,911	524	14
Providence.....	20,010	14,364	5,234	398	9,854	7,043	2,634	169	10,156	7,321	2,600	229
Warwick town.....	2,726	1,940	770	15	1,342	943	394	5	1,383	997	376	10
Woonsocket.....	4,170	2,637	1,530	3	1,967	1,243	712	2	2,213	1,394	818	1
Connecticut:												
Bridgeport ¹	9,370	6,785	2,502	83	4,584	3,328	1,221	35	4,786	3,457	1,281	48
Hartford ¹	8,394	6,412	1,844	134	4,103	3,202	835	62	4,291	3,210	1,009	72
Meriden town.....	3,310	2,886	398	27	1,730	1,508	204	18	1,690	1,377	194	9
Meriden city.....	2,806	2,429	350	27	1,483	1,281	184	18	1,323	1,148	166	9
New Britain ¹	4,193	2,835	1,351	7	2,037	1,376	659	2	2,156	1,459	692	5
New Haven ¹												
New Haven ¹	12,012	9,032	2,709	270	5,929	4,392	1,408	128	6,083	4,640	1,301	142
Norwich town.....	2,651	1,996	587	65	1,231	949	263	28	1,420	1,047	334	37
Stamford town.....	2,557	1,979	551	27	1,215	946	260	9	1,342	1,033	291	18
Stamford city.....	2,264	1,719	510	26	1,050	806	235	9	1,204	913	275	16
Waterbury ¹	6,666	5,094	1,517	55	3,277	2,428	826	24	3,399	2,666	692	31
MIDDLE ATLANTIC.												
New York:												
Albany.....	8,503	7,771	656	76	4,064	3,702	333	29	4,439	4,069	323	47
Amsterdam.....	3,197	2,177	1,015	5	1,376	973	400	3	1,821	1,204	615	2
Auburn.....	2,967	2,436	503	28	1,438	1,180	246	12	1,529	1,256	257	16
Binghamton.....	4,071	3,451	582	38	1,802	1,591	197	14	2,269	1,860	385	24
Buffalo.....	42,049	36,876	5,063	103	20,427	17,994	2,389	42	21,622	18,882	2,674	61
Elmira.....	3,764	3,398	310	66	2,021	1,736	239	46	1,743	1,652	71	20
Jamestown.....												
Jamestown.....	2,886	2,347	531	8	1,427	1,118	306	3	1,459	1,229	225	5
Kingston.....	2,637	2,419	157	61	1,225	1,110	89	26	1,412	1,309	68	35
Mount Vernon.....	2,813	2,288	442	83	1,286	1,074	182	30	1,527	1,214	260	53
New Rochelle.....	2,577	1,916	521	139	1,324	994	283	46	1,253	922	238	93
New York City.....	457,616	309,247	141,943	6,280	216,071	150,430	62,883	2,660	241,545	158,817	79,060	3,620
Newburgh.....												
Newburgh.....	2,632	2,388	193	51	1,273	1,167	89	17	1,359	1,221	104	34
Niagara Falls.....	2,596	1,770	808	17	1,307	877	419	10	1,289	893	389	7
Poughkeepsie.....	2,395	2,099	240	56	1,136	961	177	28	1,259	1,118	113	28
Rochester.....	20,122	16,866	3,190	60	9,973	8,247	1,692	34	10,149	8,619	1,498	26
Schenectady.....	5,680	4,738	924	18	2,897	2,393	497	7	2,783	2,345	427	11
Syracuse.....												
Syracuse.....	12,169	10,505	1,587	74	5,982	5,081	865	35	6,187	5,424	722	39
Troy.....	7,175	6,485	657	33	3,300	3,001	286	13	3,875	3,484	371	20
Utica.....	6,934	5,245	1,674	15	3,290	2,528	758	4	3,644	2,717	916	11
Watertown.....	2,261	1,897	360	4	1,096	894	199	3	1,165	1,003	161	1
Yonkers.....	7,734	5,745	1,865	122	3,607	2,745	814	46	4,127	3,000	1,051	76

¹ Town and city coextensive.

FEDERAL STATISTICS OF CHILDREN.

CITY.	WHITE.			Negro.	BOYS.			GIRLS.				
	Total.	Native.			Total.	White.		Negro.	Total.	White.		Negro.
			Foreign born.				Native.			Foreign born.		
MIDDLE ATLANTIC—continued.												
New Jersey:												
Atlantic City	3,439	2,568	304	567	1,701	1,263	161	277	1,733	1,303	143	290
Bayonne.....	5,129	3,920	1,173	36	2,543	1,931	599	13	2,596	1,989	574	28
Camden.....	8,706	7,382	823	497	4,219	3,597	407	212	4,467	3,785	416	283
East Orange.....	2,910	2,394	355	160	1,299	1,177	89	42	1,611	1,217	276	118
Elizabeth.....	6,755	5,362	1,262	131	3,261	2,637	592	62	3,474	2,736	670	69
Hoboken.....	6,793	5,408	1,377	8	3,419	2,704	711	4	3,374	2,704	666	4
Jersey City.....	25,635	21,439	3,803	391	12,514	10,435	1,905	172	13,121	11,004	1,896	219
Newark.....	32,809	25,158	6,899	750	15,535	12,090	3,110	334	17,274	13,068	3,789	416
Orange.....	2,724	2,084	464	175	1,317	1,002	235	79	1,407	1,062	229	96
Pasaden.....	7,177	2,587	4,531	59	2,495	1,262	1,161	22	4,742	1,386	3,376	37
Paterson.....	12,398	9,631	2,644	118	5,982	4,677	1,253	50	6,416	4,954	1,392	68
Perth Amboy.....	3,022	2,024	982	16	1,454	977	473	4	1,568	1,047	509	12
Trenton.....	9,285	7,466	1,624	193	4,568	3,692	796	71	4,722	3,774	836	122
West Hoboken town.....	3,432	2,681	744	2	1,619	1,284	330	.....	1,813	1,397	414	2
Pennsylvania:												
Allentown.....	5,119	4,396	713	10	2,270	2,090	177	3	2,849	2,308	536	7
Altoona.....	4,820	4,586	198	36	2,409	2,289	108	17	2,411	2,297	95	19
Chester.....	3,689	2,976	340	372	1,915	1,531	216	168	1,774	1,445	194	204
Easton.....	2,600	2,336	231	33	1,253	1,112	124	17	1,347	1,224	107	16
Erie.....	6,045	5,394	628	23	2,962	2,608	343	11	3,083	2,786	285	12
Harrisburg.....	5,709	5,073	261	375	2,680	2,387	132	161	3,029	2,688	129	214
Hazleton.....	2,687	2,392	294	1	1,260	1,117	168	.....	1,407	1,275	131	1
Johnstown.....	5,616	4,511	1,076	27	3,015	2,242	768	8	2,601	2,269	312	19
Lancaster.....	4,509	4,333	1,102	74	2,116	2,027	60	29	2,366	2,306	42	45
McKeesport.....	4,212	3,429	712	69	2,088	1,665	392	29	2,124	1,764	330	40
New Castle.....	3,207	2,525	630	52	1,645	1,247	376	22	1,593	1,273	264	30
Norristown.....	2,513	2,207	235	71	1,186	1,084	118	34	1,397	1,173	117	37
Philadelphia.....	141,540	113,501	22,263	5,743	67,600	55,217	10,085	2,268	73,940	53,264	12,173	3,478

Pittsburgh.....	50,808	41,458	7,513	1,822	24,739	20,289	3,027	849	26,064	21,208	3,896	973
Reading.....	9,128	8,550	512	66	4,405	4,096	285	24	4,723	4,454	227	42
Beranton.....	13,163	11,485	1,026	52	6,424	5,542	859	23	6,739	5,943	767	29
Shenandoah.....	2,434	1,826	607	1	1,327	957	369	1	1,107	869	238	.....
Wilkes-Barre.....	6,856	6,003	812	41	3,346	2,878	445	22	3,510	3,126	366	19
Williamsport.....	2,996	2,851	47	98	1,407	1,346	21	40	1,589	1,506	26	58
York.....	4,276	4,110	67	99	2,092	2,004	46	45	2,184	2,106	24	54
EAST NORTH CENTRAL.												
Ohio:												
Akron.....	6,515	5,801	662	52	3,350	2,956	362	32	3,165	2,845	300	20
Canton.....	4,738	4,241	464	27	2,440	2,084	344	11	2,293	2,157	120	16
Cincinnati.....	35,285	31,775	2,004	1,506	17,291	15,623	972	696	17,994	16,182	1,032	810
Cleveland.....	52,383	41,076	10,726	589	25,746	20,112	5,365	258	26,637	20,964	5,360	311
Columbus.....	16,479	14,846	572	1,056	8,104	7,259	365	475	8,375	7,587	207	581
Dayton.....	10,393	9,418	618	355	5,165	4,646	366	152	5,228	4,772	282	203
Hamilton.....	3,441	3,335	66	39	1,675	1,618	37	19	1,766	1,717	29	20
Lima.....	2,971	2,815	58	98	1,386	1,302	31	53	1,585	1,513	27	45
Lorain.....	2,282	1,662	580	40	1,181	818	340	23	1,101	844	240	17
Newark.....	2,359	2,228	91	40	1,235	1,145	69	21	1,124	1,083	22	19
Springfield.....	4,405	3,905	63	437	2,180	1,915	47	218	2,225	1,990	16	219
Toledo.....	15,978	14,655	1,203	115	7,779	7,069	652	54	8,199	7,596	551	61
Youngstown.....	6,867	5,427	1,301	138	3,536	2,666	809	60	3,331	2,761	492	78
Zanesville.....	2,552	2,372	41	137	1,213	1,126	25	61	1,339	1,246	16	76
Indiana:												
Evansville.....	7,041	6,433	43	565	3,431	3,153	23	255	3,610	3,269	29	310
Fort Wayne.....	6,277	6,055	178	43	2,860	2,862	101	16	3,297	3,198	77	27
Indianapolis.....	20,307	17,939	647	1,720	9,905	8,712	437	765	10,402	9,227	299	955
South Bend.....	5,092	4,381	667	37	2,620	2,209	397	17	2,472	2,181	270	20
Terre Haute.....	5,431	5,094	94	243	2,592	2,413	54	125	2,839	2,681	40	118
Illinois:												
Aurora.....	2,832	2,538	270	24	1,383	1,201	168	14	1,449	1,337	102	10
Bloomington.....	2,464	2,320	72	72	1,111	1,044	32	35	1,353	1,276	40	37
Chicago.....	208,368	167,681	37,979	2,618	100,363	89,819	18,265	1,203	108,005	86,862	19,714	1,415
Danville.....	2,632	2,463	38	131	1,241	1,166	16	59	1,391	1,297	28	72
Decatur.....	2,948	2,815	67	66	1,420	1,336	49	35	1,528	1,479	18	31
East St. Louis.....	5,338	4,392	457	489	2,694	2,161	287	246	2,644	2,231	170	243
Elgin.....	2,445	2,324	109	12	1,134	1,058	71	5	1,311	1,266	38	7
Joliet.....	3,202	2,743	427	32	1,596	1,308	272	16	1,606	1,435	155	16
Pecoria.....	6,034	5,713	206	115	2,896	2,744	96	54	3,138	2,969	108	61
Quincy.....	3,665	3,498	29	137	1,714	1,699	17	67	1,951	1,889	12	70
Rockford.....	4,190	3,625	551	14	2,066	1,751	312	3	2,124	1,874	239	11
Springfield.....	4,607	4,138	219	253	2,150	1,928	96	130	2,457	2,210	123	123

TABLE 39.—CHILDREN 15 TO 19 YEARS OF AGE, BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: CENSUS OF 1910—Continued.

FEDERAL STATISTICS OF CHILDREN.

CITY.	WHITE.			Negro.	BOYS.			Negro.	GIRLS.			Negro.	
	Total.	Foreign born.			Total.	White.			Total.	White.			
		Native.	Foreign born.			Native.	Foreign born.			Native.	Foreign born.		
EAST NORTH CENTRAL—continued.													
Michigan:													
Battle Creek.....	2,160	1,987	129	44	1,006	910	73	23	1,154	1,077	56	21	
Bay City.....	4,665	4,399	262	13	2,261	2,114	140	6	2,404	2,286	112	7	
Detroit.....	43,392	35,094	7,906	385	21,639	17,234	4,240	191	21,723	17,890	3,606	194	
Flint.....	3,542	3,212	287	43	1,976	1,761	195	20	1,566	1,451	93	23	
Grand Rapids.....	10,662	9,487	1,131	43	5,046	4,435	590	20	5,616	5,052	541	23	
Jackson.....	2,562	2,407	134	21	1,233	1,150	74	9	1,329	1,257	60	12	
Kalamazoo.....	3,622	3,233	329	59	1,655	1,459	171	24	1,967	1,774	156	25	
Lansing.....	3,218	2,974	220	24	1,919	1,766	152	11	1,299	1,218	65	13	
Saginaw.....	4,964	4,653	285	26	2,379	2,215	156	8	2,565	2,438	129	18	
Wisconsin:													
Green Bay.....	2,576	2,506	59	3	1,150	1,115	32	1	1,426	1,391	27	2	
La Crosse.....	3,307	3,193	109	6	1,561	1,491	57	3	1,766	1,702	52	2	
Madison.....	2,446	2,298	132	9	1,164	1,092	61	6	1,262	1,206	71	4	
Milwaukee.....	38,520	34,017	4,454	48	18,737	16,194	2,533	19	19,763	17,833	1,931	29	
Oshkosh.....	3,395	3,170	211	11	1,630	1,489	127	3	1,775	1,681	84	8	
Racine.....	3,708	3,180	516	11	1,855	1,596	314	5	1,863	1,644	202	6	
Sheboygan.....	2,889	2,470	419	.....	1,455	1,190	265	.....	1,484	1,290	154	.....
Superior.....	3,595	2,874	501	5	1,599	1,317	263	2	1,806	1,557	243	3	
WEST NORTH CENTRAL.													
Minnesota:													
Duluth.....	7,122	5,887	1,209	23	2,497	2,393	947	14	2,636	2,554	802	9	
Minneapolis.....	28,312	25,110	3,045	150	12,294	11,750	1,428	77	15,018	12,390	1,852	73	
St. Paul.....	22,126	20,026	1,915	177	10,370	9,337	943	26	11,765	10,683	972	91	
Iowa:													
Cedar Rapids.....	3,226	3,041	173	12	1,536	1,442	90	3	1,691	1,599	89	9	
Clinton.....	2,561	2,423	97	22	1,226	1,164	63	19	1,396	1,278	44	12	
Council Bluffs.....	2,894	2,766	104	22	1,401	1,315	69	15	1,493	1,451	26	7	
Des Moines.....	3,977	3,768	146	24	1,869	1,504	79	16	2,078	1,934	65	15	

Des Moines.....	7,856	7,274	344	238	3,851	3,560	182	109	4,005	3,714	162	129
Dubuque.....	3,787	3,685	97	4	1,758	1,697	57	3	2,029	1,988	40	1
Stoux City.....	4,807	4,295	488	24	2,373	2,059	301	13	2,434	2,236	187	11
Waterloo.....	2,448	2,350	96	2	1,180	1,128	52	.....	1,268	1,222	44	2
Missouri:												
Joplin.....	3,053	2,962	13	78	1,454	1,411	9	34	1,599	1,551	4	44
Kansas City.....	21,535	18,861	924	1,742	10,177	8,875	512	784	11,358	9,986	412	958
St. Joseph.....	7,494	6,782	312	399	3,511	3,155	167	188	3,983	3,627	145	211
St. Louis.....	66,410	57,907	5,168	3,319	32,064	27,827	2,660	1,567	34,346	30,080	2,508	1,752
Springfield.....	3,685	3,443	23	226	1,744	1,607	14	123	1,951	1,836	9	103
Nebraska:												
Lincoln.....	4,016	3,558	398	56	1,927	1,718	180	25	2,089	1,840	218	31
Omaha.....	11,501	10,278	943	275	5,551	4,952	471	123	5,950	5,326	472	152
South Omaha.....	2,669	2,252	351	63	1,363	1,123	205	32	1,306	1,129	146	31
Kansas:												
Kansas City.....	8,004	6,687	472	841	3,938	3,268	295	372	4,066	3,419	177	469
Topeka.....	4,157	3,541	120	494	1,988	1,679	64	245	2,169	1,862	56	249
Wichita.....	4,953	4,631	87	234	2,330	2,163	49	117	2,623	2,468	38	117
SOUTH ATLANTIC.												
Delaware:												
Wilmington.....	8,236	6,714	746	776	4,044	3,305	402	337	4,192	3,409	344	439
Maryland:												
Baltimore.....	54,253	42,525	4,114	7,607	25,124	20,226	1,810	3,084	29,129	22,299	2,304	4,523
District of Columbia:												
Washington ¹	28,112	18,644	820	8,620	13,232	9,053	436	3,717	14,580	9,591	384	4,903
Virginia:												
Lynchburg.....	3,280	2,146	20	1,114	1,440	1,018	13	409	1,840	1,128	7	705
Norfolk.....	6,086	3,595	184	2,304	2,754	1,649	99	1,003	3,332	1,946	85	1,301
Portsmouth.....	3,392	2,243	61	1,088	1,874	1,334	32	508	1,518	909	29	580
Richmond.....	12,865	7,869	188	4,807	5,949	3,794	101	2,054	6,916	4,075	87	2,753
Roanoke.....	3,689	2,713	39	936	1,727	1,315	20	391	1,962	1,398	19	545
West Virginia:												
Huntington.....	3,291	3,046	20	224	1,579	1,461	9	108	1,712	1,585	11	116
Wheeling.....	3,893	3,582	222	89	1,879	1,740	97	42	2,014	1,842	125	47
North Carolina:												
Charlotte.....	3,558	2,226	20	1,311	1,612	1,063	10	538	1,946	1,163	10	773
Wilmington.....	2,434	1,260	11	1,159	1,120	613	6	498	1,314	647	5	661
South Carolina:												
Charleston.....	5,920	2,649	73	3,198	2,582	1,226	42	1,314	3,338	1,423	31	1,884
Columbia.....	2,525	1,288	26	1,211	1,162	637	12	513	1,363	651	14	696

¹ Population is for the District of Columbia with which the city is coextensive.

TABLE 39.- CHILDREN 15 TO 19 YEARS OF AGE BY SEX, RACE, AND NATIVITY, FOR CITIES HAVING A POPULATION OF 25,000 OR OVER: (CENSUS OF 1910—Continued.)

FEDERAL STATISTICS OF CHILDREN.

98

CITY.	WHITE.			Negro.	BOYS.			GIRLS.		
	Total.		Negro.		Total.		Negro.	Total.		Negro.
	Native.	Foreign born.			Native.	Foreign born.		Native.	Foreign born.	
SOUTH ATLANTIC—continued.										
Georgia:										
Atlanta.....	15,240	9,777	235	7,054	4,665	138	2,250	8,226	5,112	3,017
Augusta.....	4,180	2,171	39	1,812	958	24	829	2,368	1,213	1,139
Macon.....	4,138	2,200	29	1,918	1,106	18	794	2,220	1,184	1,026
Savannah.....	6,029	2,826	144	2,715	1,369	89	1,257	3,314	1,457	1,802
Florida:										
Jacksonville.....	5,252	2,394	120	2,475	1,212	64	1,197	2,777	1,182	1,538
Tampa.....	3,633	1,799	1,018	1,735	847	536	351	1,898	952	464
EAST SOUTH CENTRAL.										
Kentucky:										
Covington.....	5,412	5,151	24	2,617	2,494	12	110	2,795	2,657	126
Lexington.....	3,186	2,133	25	1,524	1,030	22	470	1,662	1,103	555
Louisville.....	22,152	18,975	470	10,708	8,742	247	1,716	11,444	9,333	1,888
Newport.....	3,159	3,005	98	1,534	1,464	45	25	1,625	1,541	31
Tennessee:										
Chattanooga.....	4,360	2,502	65	2,072	1,212	34	826	2,288	1,290	967
Knoxville.....	4,134	3,232	30	1,985	1,531	16	388	2,199	1,701	484
Memphis.....	11,968	6,765	318	5,679	3,246	191	2,240	6,289	3,519	2,641
Nashville.....	11,602	7,461	125	5,425	3,556	54	1,815	6,177	3,905	2,201
Alabama:										
Birmingham.....	12,456	7,294	283	5,966	3,621	172	2,172	6,490	3,673	2,706
Mobile.....	4,844	2,698	88	2,158	1,250	50	858	2,686	1,448	1,199
Montgomery.....	3,873	1,858	31	1,762	877	21	864	2,111	981	1,120
WEST SOUTH CENTRAL.										
Arkansas:										
Little Rock.....	4,469	2,825	58	2,078	1,341	35	702	2,391	1,484	882
Louisiana:										
New Orleans.....	33,843	24,142	932	15,626	11,484	431	3,698	18,217	12,678	5,057
Shreveport.....	2,016	1,159	54	1,126	571	26	532	1,496	554	871

Oklahoma:	2,324	1,449	14	825	1,085	674	8	386	1,239	775	6	439
Muskogee.....	5,545	4,851	105	574	2,774	2,438	69	262	2,771	2,413	36	312
Oklahoma City.....												
Texas:												
Austin.....	3,199	2,281	79	836	1,485	1,087	26	371	1,714	1,194	53	465
Dallas.....	8,765	6,878	191	1,693	4,077	3,245	100	729	4,688	3,633	91	964
El Paso.....	3,492	1,954	1,416	114	1,539	923	557	51	1,953	1,031	859	63
Fort Worth.....	6,685	5,321	189	1,173	3,205	2,554	112	537	3,480	2,767	77	636
Galveston.....	3,249	2,357	187	702	1,527	1,128	92	304	1,722	1,229	95	398
Houston.....	7,514	5,016	246	2,259	3,511	2,457	117	935	4,003	2,549	129	1,324
San Antonio.....	9,762	7,545	1,103	1,104	4,472	3,477	495	492	5,290	4,068	608	612
Waco.....	2,807	2,144	50	608	1,307	1,009	28	267	1,500	1,135	22	341
MOUNTAIN.												
Montana:												
Butte.....	2,808	2,534	261	13	1,326	1,197	116	4	1,482	1,337	135	9
Colorado:												
Colorado Springs.....	2,499	2,375	53	68	1,193	1,134	23	33	1,306	1,241	30	35
Denver.....	18,613	16,971	1,241	377	8,821	8,030	608	167	9,792	8,941	633	210
Pueblo.....	3,592	3,052	426	111	1,744	1,419	277	45	1,848	1,633	149	66
Utah:												
Ogden.....	2,613	2,400	189	7	1,306	1,182	104	3	1,307	1,218	85	4
Salt Lake City.....	8,832	7,991	766	41	4,232	3,823	367	14	4,600	4,168	399	27
PACIFIC.												
Washington:												
Seattle.....	18,175	15,812	1,969	88	9,162	7,766	1,114	34	9,013	8,046	855	54
Spokane.....	8,540	7,822	675	52	4,155	3,732	376	29	4,425	4,090	299	23
Tacoma.....	7,405	6,521	794	55	3,824	3,288	484	25	3,581	3,233	310	30
Oregon:												
Portland.....	16,583	14,721	1,675	37	8,126	7,013	966	16	8,457	7,708	709	21
California:												
Los Angeles.....	25,606	22,061	2,561	644	12,553	10,575	1,412	280	13,053	11,486	1,149	364
Oakland.....	12,329	10,764	1,040	201	5,990	5,093	539	94	6,339	5,671	501	107
San Francisco.....	32,465	27,545	3,726	107	16,871	13,793	2,083	63	15,594	13,752	1,643	44
Berkeley.....	3,839	3,436	259	22	1,892	1,662	120	11	1,947	1,774	139	11
Pasadena.....	2,348	2,193	115	60	1,147	1,042	61	27	1,241	1,151	54	33
Sacramento.....	3,630	3,128	296	49	1,805	1,475	171	22	1,825	1,653	125	27
San Diego.....	3,132	2,763	297	47	1,553	1,347	163	18	1,579	1,416	132	29
San Jose.....	2,550	2,316	198	6	1,182	1,057	99	2	1,368	1,259	99	4



U. S. DEPARTMENT OF LABOR
21. . . CHILDREN'S BUREAU
JULIA C. LATHROP, Chief

NEW ZEALAND SOCIETY FOR THE HEALTH OF WOMEN AND CHILDREN

AN EXAMPLE OF METHODS OF
BABY-SAVING WORK IN SMALL
TOWNS AND RURAL DISTRICTS

INFANT MORTALITY SERIES, No. 2

Bureau Publication, No. 6



WASHINGTON
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CONTENTS.

	Page.
Letter of transmittal.....	3
What the society has accomplished.....	5
Territory in which the society works.....	7
How the results have been accomplished.....	8
Complete birth registration an aid in society's work.....	9
Comprehensive policy of society.....	9
Local committees.....	10
Plunket nurses.....	10
"Our Babies" columns.....	11
Karitane-Harris Hospital.....	12
Publications.....	13
Conclusion.....	14
Appendix.....	15
Rules of membership of the society.....	15
Rules for the Plunket nurses.....	15
Hints for the general guidance of Plunket nurses.....	16
Public health work in New Zealand.....	17

LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF LABOR,
CHILDREN'S BUREAU,
Washington, D. C., March 30, 1914.

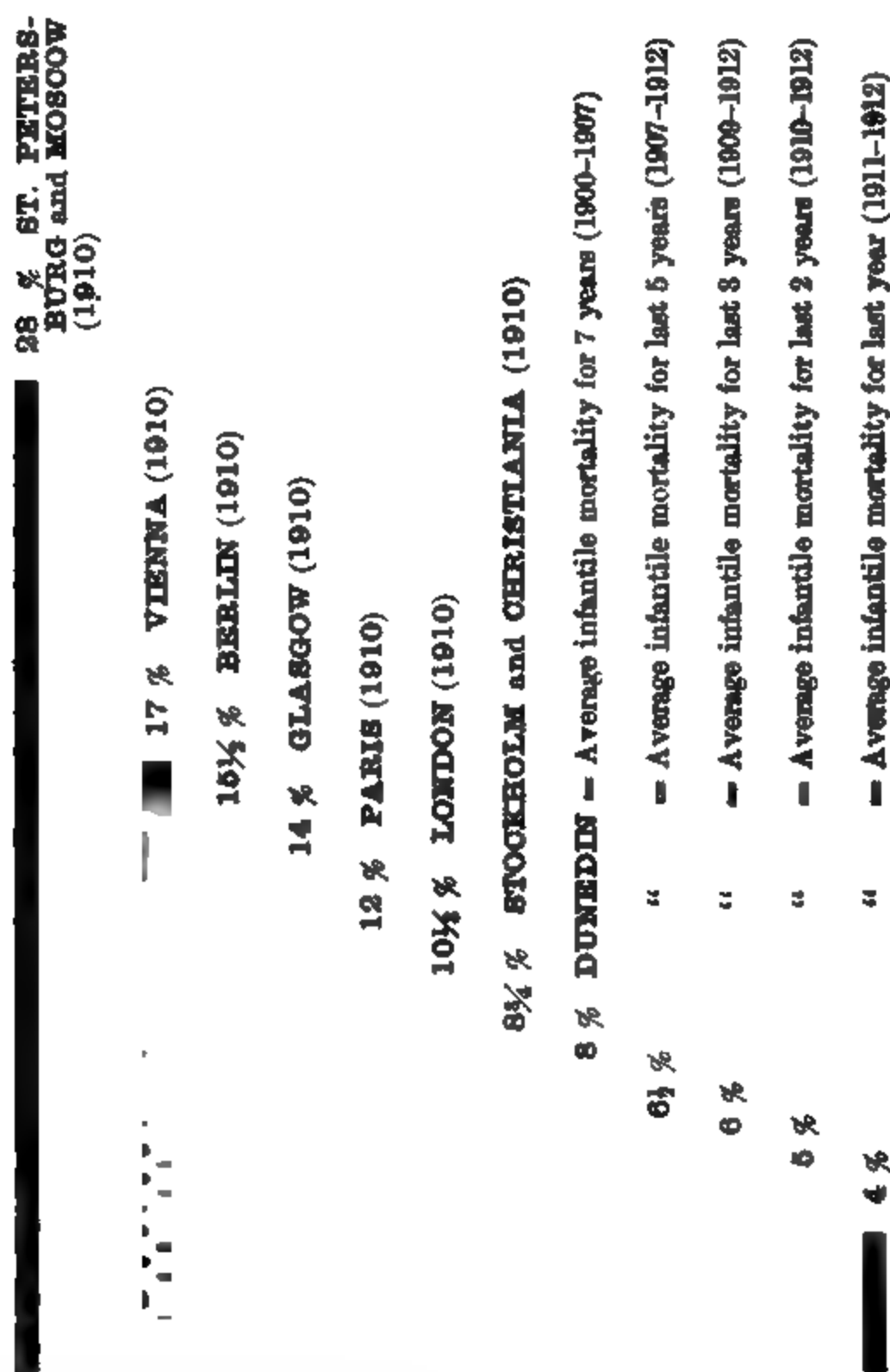
SIR: I have the honor to transmit herewith a report concerning the work of the New Zealand Society for the Health of Women and Children.

Through the courtesy of the State Department the work of the society was brought to the attention of this bureau by a report of the American consul general at Auckland, Mr. William A. Prickitt. The infant mortality rate of New Zealand has been for some time recognized as the lowest of any country in the world and it is stated that recent further reductions are due in large measure to the activity of this society. As an example of its value, the consul general states that the work of the society has reduced infant mortality in Dunedin, a residential city of about 60,000 inhabitants, 50 per cent during five years, from 1907 to 1912. Because of the absence of adequate birth and death registration in the United States, the infant death rate of this country, as a whole, is unknown, but estimates tend to show that it is at least twice the rate in New Zealand, which the registrar general of that country reported in 1912 to be 51 per 1,000. New Zealand, like certain of our States, is a young and vigorous country with a scattered population and with no large cities, and there is every reason to believe that similar volunteer effort in this country would produce similar results. In view of the marked and growing interest in the preservation of infant health in the smaller cities and rural communities of the United States, I believe that the following account of the methods of the New Zealand society is especially timely. It will be seen that public interest is strongly enlisted in its efforts. Seventy volunteer committees in as many districts maintain the educational and nursing work in conjunction with the central office, and the Government itself assists in various ways. The detailed statement which follows is not offered for the purpose of urging exact reproduction of the New Zealand organization, but rather to stimulate interest in working out whatever methods are practicable locally for securing the same results which New Zealand secures.

This report has been prepared by Mrs. Etta R. Goodwin, of the Children's Bureau.

Very respectfully,
HON. WILLIAM B. WILSON,
Secretary of Labor.

JULIA C. LATHROP, *Chief.*



The decrease has been a general one in New Zealand and not confined to a single city as is shown by a table from the Report of the Inspector General of Hospitals and Charitable Institutions and Chief Health Officer for 1911-12:

NUMBER OF DEATHS PER 100 BIRTHS¹ IN NEW ZEALAND AS A WHOLE AND IN THE FOUR PRINCIPAL CITIES, YEARS 1902-1912.

2000

1000

500

250

125

62

¹ Original table shows deaths per 1,000 births. ² Figures from Official Yearbook of New Zealand, 1912.

In order fully to realize what a remarkable work has been accomplished it will be significant to compare the figures with the rates of some of the States and cities in the United States. The registration of births in the United States is so incomplete that no figures for our country as a whole can be quoted in discussions of birth and death rates. In a few States and individual cities, however, the registration, although not complete, is good enough to furnish figures which may be compared with those for New Zealand in order to study the relative success of the two areas in preserving the lives of their babies. The following rates are quoted from the report of the Bureau of the Census, Mortality Statistics, 1911, from the New Zealand reports, and from the Sixty-ninth Report of Births, Marriages, and Deaths in Massachusetts.

	Deaths of infants un- der 1 year for every 100 births, 1910.		Deaths of infants un- der 1 year for every 100 births, 1910.
New Zealand.....	15.1	CITIES—continued.	
STATES.		Malden, Mass.....	29.0
Connecticut.....	12.7	New Bedford, Mass.....	27.9
Massachusetts.....	13.1	Somerville, Mass.....	20.2
New Hampshire.....	14.6	Springfield, Mass.....	22.5
New York.....	12.9	Worcester, Mass.....	13.7
Rhode Island.....	15.8	Detroit, Mich.....	17.9
CITIES.		Grand Rapids, Mich.....	12.2
Dunedin.....	13.8	Kansas City, Mo.....	15.4
Los Angeles, Cal.....	9.7	St. Louis, Mo.....	11.5
Bridgeport, Conn.....	12.3	Omaha, Nebr.....	12.6
New Britain, Conn.....	215.1	Newark, N. J.....	12.4
New Haven, Conn.....	10.8	Buffalo, N. Y.....	16.2
Stamford, Conn.....	213.1	New York, N. Y.....	212.5
Washington, D. C.....	15.2	Syracuse, N. Y.....	16.0
Indianapolis, Ind.....	12.3	Cincinnati, Ohio.....	13.1
Boston, Mass.....	12.6	Columbus, Ohio.....	12.1
Brockton, Mass.....	210.2	Dayton, Ohio.....	12.9
Fall River, Mass.....	18.6	Philadelphia, Pa.....	13.8
Lawrence, Mass.....	216.8	Pittsburgh, Pa.....	15.9
Lowell, Mass.....	23.1	Providence, R. I.....	14.4
Lynn, Mass.....	210.0	Seattle, Wash.....	8.2
		Spokane, Wash.....	12.8
		Milwaukee, Wis.....	14.5

1 For 1912.

2 Sixty-ninth Report of Births, Marriages, and Deaths in Massachusetts. These cities were chosen in order that an opportunity might be given to compare the New Zealand rates with cities in the United States in approximately the same population class as the New Zealand cities.

3 The report of the New York State Department of Health shows a reduction to 10.5 per 100 births in 1912.

TERRITORY IN WHICH SOCIETY WORKS.

In estimating the problem with which the health agencies in New Zealand have to deal, and in judging the practicability of methods with reference to their application to the problems of the United States, it is interesting to remember that in its youth as a country (actual settlement was not begun until 1839), in its size, and in the number of its people, New Zealand is not dissimilar to some of the States in the United States. The length of the whole group of islands is 1,000 miles and the extreme width is 180 miles. The area in square miles is 104,751 and the population was 1,071,428 in 1911.

An agency undertaking to raise the standard of health finds the ground well prepared in New Zealand. A writer in speaking of the country says that it is like a big family.¹ It is easy to understand what he means when an examination is made of the reports and publications of the various governmental, semigovernmental, and private agencies engaged in betterment work. There is a note in these reports which testifies to a general spirit of cooperation, a neighborly interest in the small intimate concerns of the community, and an encouragement of mutual helpfulness. As the chief interest of the individual family is centered upon the baby, the interest of the whole community in the welfare of infants seems to have been deepened by the development of the family spirit in New Zealand.

The influence and aid of the Government is available in all benevolent activities.² The most interesting features of the public health work for consideration in connection with our subject are: A system of State registration of nurses; registration of midwives; Government maternity hospitals; supervision of infant asylums and kindred institutions; and complete registration of births.

HOW THE RESULTS HAVE BEEN ACCOMPLISHED.

When Dr. Truby King organized the society he was fortunate enough to gain for it the interest of the former governor of New Zealand and Lady Plunket. Lord Plunket issued a pamphlet setting forth the necessity for such a mission and appealing to all classes to join the society, "for the sake of women and children, for the advancement of the Dominion, and for the honor of the Empire." Lady Plunket threw herself whole-heartedly into the work, showing her intense interest by lecturing, demonstrating, and personally helping the mothers and babies. As a mark of appreciation of her work the nurses of the society were given the name "Plunket nurses." The society itself is often referred to as the "Plunket society."

The society is not only supervised by the Government, which inspects the reports and balance sheets of each branch, passes upon proposals to form new branches, and approves the appointment of nurses, but it receives financial aid. This is a feature which it would not be practicable to copy in the United States, as it would be contrary to provisions in some of the State constitutions. The assistance, moreover, is incidental and has no effect upon the importance of the society as a model for volunteer effort.

City and Government officials cooperate cordially with the society whenever occasion arises. As an instance of this, the mayor of Dunedin grants the use of the council chamber once a month for the meetings. The post office also helps by setting aside a room for the use of the Plunket nurses.

¹ Max Herz, New Zealand.

² See Appendix, p. 17.

COMPLETE BIRTH REGISTRATION AN AID IN THE SOCIETY'S WORK.

New Zealand has incorporated in its plan of government some of the best traditions of the older countries. Thus, in spite of its youth as a country, it has established so perfect a system of birth registration that the figures are accepted by the authorities in European countries. In this, New Zealand stands in striking contrast to the United States, which, of all the civilized countries, has no general system of accurate registration. The fact that births and deaths are properly recorded has aided the health society in every stage of its work and has made it possible at all times to gauge the effect of the work in reducing the number of infant deaths.

COMPREHENSIVE POLICY OF THE SOCIETY.

The functions of the society are outlined in the report for 1913 as follows:

(1) To uphold the sacredness of the body and the duty of health; to inculcate a lofty view of the responsibilities of maternity and the duty of every mother to fit herself for the perfect fulfillment of the natural calls of motherhood, both before and after childbirth, and especially to advocate and promote the breast feeding of infants.

(2) To acquire accurate information and knowledge on matters affecting the health of women and children, and to disseminate such knowledge through the agency of its members, nurses, and others, by means of the natural handing on from one recipient or beneficiary to another, and the use of such agencies as periodical meetings at members' houses, or elsewhere, demonstrations, lectures, correspondence, newspaper articles, pamphlets, books, etc.

(3) To employ especially trained and qualified nurses, to be called Plunket nurses, whose duty it will be to give sound, reliable, instruction, advice, and assistance, gratis, to any member of the community desiring such services, on matters affecting the health and well-being of women, especially during pregnancy and while nursing infants, and on matters affecting the health and well-being of children; and also to endeavor to educate and help parents and others in a practical way in domestic hygiene in general—all these things being done with a view to conserving the health and strength of the rising generation, and rendering both mother and offspring hardy, healthy, and resistive to disease.

(4) To promote legislative reform in matters pertaining to the health of women and children.

(5) To cooperate with any present or future organizations which are working for any of the foregoing or cognate objects.

Further definition of the aims of the society is embodied in a speech delivered at the annual meeting in 1912.

The society is less concerned in reducing the death rate than in improving the health of the people. As a health society, we are more interested in firmly establishing the all-round fitness of the 24,000 or 25,000 annual new arrivals who will live than we are in reducing the potential deaths from 2,000 to 1,000. However, the problems are practically identical, since the simple hygienic measures which tend to prevent death in babyhood are also the measures which lay the foundations of strong and healthy minds in sound enduring bodies for those who survive to be our future men and women.

It will be seen that the work of the society is mainly educational. It is felt that this education should be free because it is in the highest interest of the state that as far as possible every woman in the Dominion should be induced to avail herself of the services offered by the society with a view to the betterment of the race, the recipient herself being always regarded as a potential health advocate and teacher. Furthermore, the society takes the stand that its functions while broadly humanitarian are not patronizing or charitable, nor even in the ordinary sense philanthropic, but are essentially patriotic and educational.

The society is largely officered by women; the president, vice president, the 22 members of the committee, as well as the heads of the numerous branches of the society, all are women.

LOCAL COMMITTEES.

The society now has eight branches, four in the north island and four in the south island. Local committees, with a membership of 15 or 20, have been organized in every township where a body of earnest women could be interested. About 70 of these local committees are now in existence.

In organizing the committees it has been the aim to make them as representative as possible, to have all religious sects and all classes in the community participate.

The local committees arrange for the nurses' visits and between the visits carry on the work. There is an endeavor to develop the spirit of service, and there are many women who, having gained knowledge and received benefits themselves, prove willing and efficient in assisting their neighbors, and who generously and gratuitously carry on the functions of a Plunket nurse. The committees are encouraged to cooperate with educational authorities with a view to kindling and quickening the interest, feeling, and capabilities of girls in the direction of home life, especially in matters affecting their own health and happiness and bearing on the care and nurture of babies and little children.

PLUNKET NURSES.¹

The main function of the Plunket nurse is sympathetically and tactfully to educate and help parents and others in a practical way in the hygiene of the home and nursery, with a view to conserving the health of the whole family while directing especial attention to the needs of the mother and offspring. The nurses appointed are either general hospital nurses with a three-months' special training at the society's hospital or registered maternity nurses. Twenty-two nurses are now employed.

¹ See Appendix, pp. 15 to 17.

The nurse is expected to work within a radius of about 50 miles. She is resident at the center and makes periodical visits to the neighboring towns and outlying districts every week, every month, every quarter, or every six months or so, according to circumstances. The local committees make arrangements for the nurse's visit, and her time is spent in visiting schools, attending mothers' meetings, giving demonstrations, visiting homes, etc.

The nurse whenever possible gives "living" demonstrations. It has been found that in interesting young girls in the care and nurture of babies and young children nothing is so effectual as having a live winsome baby brought into the classroom.

Correspondence with mothers in country districts too remote to be visited often is a part of the duty of the nurse. It is evident from the reports of the society that there is every encouragement for a father or mother to write freely to the society for advice. Apparently the personal note has been preserved, and the society has been able to avoid all methods which will be likely to repel or discourage.

The services of the nurse are free to any member of the community, rich or poor. At the same time parents who could afford to pay for service are encouraged to make a contribution to the society and thus assist in broadening the work.

It is the nurse's first duty to inculcate the importance of breast feeding and to try to establish it.

Nurses are asked to discourage the use of the dummy and the long-tube feeding bottle. In keeping with its policy to promote legislative reform the society in its third annual conference passed a resolution urging the enactment of legislation to prevent the use of these two discredited articles.

The nurse may be consulted by expectant mothers. This is considered an important phase of her work and one that is particularly consistent with the educational objects of the society.

In cases of emergency the nurse may act as a maternity nurse. But under no circumstances in such cases is she permitted to stay with the case more than 24 hours.

A nurse is in regular attendance at what is called the "Plunket room," in Dunedin. This seems to correspond with what are known as baby clinics or conferences in the United States. In this room babies are weighed and examined, with the particular object of determining whether they are getting the right quantity of food, and, in the case of bottle-fed babies, whether the milk preparation upon which they are being fed is agreeing with them.

"OUR BABIES" COLUMNS.

The society at the beginning of its existence adopted a method of giving publicity to helpful suggestions and discussions dealing with

the health of babies which is worthy of especial note. This consists in publishing, through the courtesy of the newspapers, a weekly column (sometimes as much as two columns) of advice on the care of babies. It is known as the "Our Babies" column. The circulation of these columns at the time of the last report of the society was at least 200,000, and by one channel or another they reach practically every home in the Dominion. At one time it was hoped that with the extension of the Plunket nursing and the publication of the society's comprehensive book, "Feeding and Care of Baby," the issue of the "Our Babies" columns could be reduced to an article once a month. This suggestion, however, aroused emphatic protest; the column has proved its usefulness and its weekly appearance is more than justified.

The column is headed "Our Babies, by Hygeia," with the motto "It is better to put a fence at the top of a precipice than to maintain an ambulance at the bottom." Then follow the addresses and telephone numbers of all the Plunket nurses and those of the secretaries of the society. The statement that the Plunket nurses' services are free is brought out prominently. The column also calls attention to the fact that the society's book, "What Baby Needs," can be obtained from the nurses, the matron of the Karitane-Harris Hospital, the honorary secretaries, and the leading booksellers throughout the Kingdom, at the price of 6d. or, when posted, 7d. The column contains articles on such subjects as "The use and abuse of aperients," "Mastication," "The feeding of babies in special relation to diarrhea." Letters from correspondents are published and the inquiries answered. It is intended that the articles in the "Our Babies" columns should supplement the instructions in the society's book, "Feeding and Care of Baby," and the book contains a note suggesting that the articles as they appear should be cut out of the newspaper and pasted in the book.

The "Our Babies" column is not the only means by which the public is kept informed of the activity of the society. The newspapers print extensive accounts of all the monthly meetings and give space to any matter which relates to the work.

KARITANE-HARRIS HOSPITAL.

The society's hospital is the only baby hospital in the Dominion, and in some respects it is the only one of its kind in the world. The unique feature consists in providing accommodations not only for the babies but, in many instances, for the mothers of the babies as well. It is felt that when a breast-fed baby is not thriving it should be weighed before and after feeding to ascertain exactly how much milk the mother is providing. By having a mother remain in the hospital with her baby in such a case the hospital authorities can attend to such weighings very carefully and can study the case with thorough-

ness. Moreover, a week's freedom from care and worry, if the rest be taken in time, will often make all the difference between health and ill health to both mother and child, and will often secure breast feeding.

Dr. Truby King, in an address given in London in August, 1913, before the English-speaking Conference on Infant Mortality, made the following reference to the work of the hospital:

In one sense the healing of babies is the least important aspect of our hospital work. The institution is a school for mothers, an ever-open object lesson, by means of which some thousands of visitors of all classes see and are taught personally every year the essentials for healthy motherhood and babyhood, while mothers who have any trouble with their babies are encouraged to become inmates for a week or 10 days, so that they may be set upon the right track.

Not only is the hospital held available for the teaching of actual mothers, but we encourage potential mothers—girls in their teens and expectant mothers—to attend weekly classes and demonstrations, or to enter the institution for a short course of training. Further, a guild of 60 girls was organized some years ago, each to spend an afternoon once a month handling and looking after the babies in the grounds, thus helping to provide the “mothering” element, apt to be lacking in institutions, and at the same time implanting and developing motherly tendencies and aptitudes in the girls themselves.

The hospital was first started in a small cottage. By a gift from Mr. Wolf Harris, of London, in 1910 the society acquired the present house and grounds.

PUBLICATIONS.

Some of the publications of the society are:

ANNUAL REPORT. This is a pamphlet of about 24 pages. It is prepared with the object not only of summing up what has been accomplished in the preceding year but of presenting instructive material concerning the history and organization of the society, together with its objects and aims. It reflects a striking cordiality toward the Government, the newspapers, and every agency and individual connected in any way with the operations and problems of the society, and an unvarying spirit of encouragement and hope.

FEEDING AND CARE OF BABY. This is an exhaustive, practical, and carefully indexed publication of 162 pages, with 60 illustrations. It has chapters on hygiene during pregnancy, natural feeding, artificial feeding, feeding during the second year, lifting and carrying the baby, training habits, popular errors, general hygiene, ailments and precautions, etc., and presents a system worthy of careful study by expectant mothers, by mothers and fathers of young children, and by all who are interested in the problems of child welfare. The book is sold for 1 shilling. Twenty thousand of these books have been sold and a new edition of 20,000 has been issued.

WHAT BABY NEEDS (WHETHER WELL OR ILL). This is a pamphlet of 48 pages and covers in a condensed form the topics dealt with in the more elaborate book on the “Feeding and Care of Baby.” It has one especially interesting chapter which relates to the care of babies in hot climates.

FEEDING BY THE CLOCK. An eight-page reprint of a chapter in the book on “Feeding and Care of Baby.”

WHAT IS BEST FOR BABY. A four-page leaflet containing helpful advice concerning the care of baby.

Reprints of addresses delivered before the society.

Rules for Plunket nurses.¹

¹ See Appendix, pp. 15 to 17.

The Government publishes pamphlets and circulars on the care of babies. One of these, "Baby's First Month," is supplied free to every mother at the time the birth of the child is registered. Postmasters are asked to distribute the pamphlet. It is estimated that approximately 25,000 copies will be issued every year. The publication is a 45-page pamphlet with 10 attractive and instructive illustrations.

"Baby's Welfare" is the name of another Government publication.

CONCLUSION.

The foregoing description of the work of the New Zealand society seems to give emphasis to a few points which may be outlined briefly:

(1) The recognition that not only in cities but in country districts provision should be made for instructing mothers in the care of babies; for teaching young girls all practical methods of home making, including baby hygiene and feeding; for giving proper hospital care to sick babies; and for maintaining conferences where mothers can have their children examined and can thus learn of any bad condition before the trouble has progressed beyond recovery.

(2) The need of definite knowledge of just what the problem is in the different communities. This knowledge it is not possible to obtain in many districts of the United States, because, on account of the incomplete registration of births and deaths, this country does not know how many babies are born and how many die. Therefore, to urge the passage of good registration laws in States in which such laws do not exist and to force efficiency in administering the registration laws in other States is a definite requirement.

(3) The need of cooperation between volunteer and public health authorities in reducing the infant mortality.¹

(4) Recognition of the merit of the methods of the New Zealand society for consideration by club women and others in making plans for infant-welfare campaigns in small towns and rural communities in the United States.

(5) The value of methods which include districting the territory in a State and organizing local committees having supervision of the welfare work; the employment of nurses whose services are chiefly educational; newspaper publicity; and the publication of pamphlets and other literature on hygiene and the care of babies and children, containing advice vouched for by the best medical authorities and expressed in direct, simple language.

¹ See analysis of public-health service in cities and towns in Illinois by Dr. George Thomas Palmer, referred to in bulletin *Baby-Saving Campaigns*, Children's Bureau, Department of Labor, pp. 10 and 11.

APPENDIX.

RULES OF MEMBERSHIP OF THE SOCIETY.

The following paragraphs, reprinted from one of the society's pamphlets, explain the general organization of the society:

MEMBERSHIP.

All persons who subscribe the sum of not less than 5s. a year to the funds of the society shall be deemed members of the society. The society's year commences on the 1st of April.

A past or future donor of a contribution of not less than £50 shall be a life member of the society without being bound to pay the annual subscription. Anyone desirous of becoming a member must send in his or her name to the secretary, accompanied by one year's subscription, unless he or she is already a life member or becomes such on joining the society.

COMMITTEE.

The society and its operations, its funds and property, shall, subject, however, to the control in all things by general meetings of the members, be governed, managed, and disposed of by a committee of the members of the society, consisting of the following: President, vice president, honorary secretary, honorary treasurer, and members.

The officers and other members of the committee shall continue in office until the election of their successors at an annual meeting. Retiring members shall be eligible for reelection. Any vacancy occurring in the committee during the year may be filled by the committee.

The personnel of the committee is to be kept as widely embracive of all sections of the community as possible, subject, of course, to there being local representatives of each class or persuasion available who would be interested, sympathetic, suitable, and willing to act.

The affairs of the society shall, subject to the control of the general meeting, be managed by the committee elected annually.

The members of the committee shall remain in office until the election of their successors. Any vacancy may be filled by the committee.

The committee shall meet once a month.

The committee may appoint executive subcommittees, to be called executives, consisting of from 5 to 10 of their number, including the president, secretary, and treasurer.

An advisory board of three or more men (including, preferably, a doctor, a solicitor, and a business man) shall be elected at the annual general meeting, with whom the committee may consult on any matter of difficulty.

Though the services of the Plunket nurses will be rendered free of charge, it is hoped that the executive of each branch will afford those persons who are in a position to do so the privilege of paying for services rendered.

Free railway passes will be granted by the public health department for the use of Plunket nurses traveling on duties connected with their work.

RULES FOR THE PLUNKET NURSES.

The services of the nurse in her special sphere of work are to be at the disposal, gratis, of any member of the community, whether rich or poor, who chooses to apply to her either directly or through a doctor, or through a member of the society.

It is expressly enjoined that where a medical man is in actual attendance, the nurse is not to act without his consent.

A Plunket nurse is a nurse engaged in the work of any of the various branches of The Society for the Health of Women and Children throughout the Dominion of New Zealand. The nurses appointed shall be either: (a) A general hospital nurse; or (b) a registered maternity nurse.

In the former case there should be three months' training at the Karitane Home, and in visiting cases outside. In the case of the maternity nurse, there should be six months' similar special training. At the end of the period an examination shall

be held, with the view to the granting of a certificate of proficiency. In all cases the fee for training will be £10.

The nurse will be entitled to be called a Plunket nurse only so long as she is employed as such in the work of the society—the working badge to be returned to the society on giving up the work.

The salary for a Plunket nurse shall be such as the society shall from time to time determine.

Uniform.—Silver-gray coat and bonnet or hat for outdoor; silver-gray cotton uniform for indoor; white apron, collar, and cuffs.

The nurse shall have one month's holiday in the year. Local committees to decide details.

Proper records must be kept of all cases, and of visits paid, and a summary must be forwarded to the committee every month.

Copies must be kept of all letters written by the Plunket nurses in connection with the work of the society. Books for this purpose will be supplied. All letters received must be kept, and duly indexed and filed as directed.

Where the Plunket nurses are in doubt as to what course they should pursue under any particular circumstance, the advice of the committee should be sought at once. Verbal inquiries may be made of the president or secretary, but where the matter does not need immediate attention, a letter should be written to the secretary.

Plunket nurses are expected to show proficiency and facility in calculating the percentage, composition, and caloric value of any milk mixture or ordinary diet.

HINTS FOR THE GENERAL GUIDANCE OF PLUNKET NURSES.

The main function of the Plunket nurses is to sympathetically and tactfully educate and help parents and others in a practical way in the hygiene of the home and nursery, with a view to conserving the health of the whole family while directing special attention to the needs of mother and offspring.

The society is extremely anxious to bring about a realization of the sufficingness in general of obedience to the simple known laws of life and nature to maintain the health of mother and child, and the inevitable Nemesis which follows sooner or later on any evasion of duty in this respect. Above all, it desires to avoid the resorting to anything savoring of mystery, or suggestive of special knowledge or powers outside the range of understanding of ordinary men and women. The nurse is not to be a "secret healer" or "mystery woman" of any kind, but a competent nurse ready to explain and show in a simple practical way the essentials for the house, and how best to insure the everyday needs for health, namely: Good air (how to secure it day and night); good food (how to prepare it, where and how to keep it, etc.); sunshine; outing; exercise; rest; sleep (how to make baby's bed); bathing, etc.; what to avoid—what not to do—(dummies, bad feeding bottles, wrong perambulators, etc.).

The Plunket nurses shall maintain a perfectly neutral attitude toward the members of the medical profession in respect to advising who should be consulted. From time to time Plunket nurses have wished to know what course they should pursue if asked by mothers to recommend a doctor. Under no circumstances may the Plunket nurses give any hint whatever as to choice or preference in this direction. Any other course would be entirely opposed to the spirit of loyalty and impartiality toward the profession which must obtain throughout.

When in doubt as to a baby's condition, the nurse should always advise the prompt calling in of the family doctor, where there is one; but whether there is or is not, she must never hint or indicate in any way who should be consulted.

Plunket nurses must never forget that the work they are engaged in is essentially a health mission. In regard to domestic hygiene, they should take the place where needed of untrained, unskilled neighbors or relations in as tactful a way as possible. They should endeavor to establish in the home an understanding and adoption of the simple principles illustrated in practice at the Karitane Harris Hospital, and inculcated in the society's books, pamphlets, "Our Babies" column, etc.

One of the first duties of the Plunket nurse is to inculcate and try to establish breast-feeding. Further, she is to teach the mothers to be capable and self-reliant, so that they may intelligently safeguard and tend themselves with their babies rather than come to depend on the nurse at every turn. A nurse may be an excellent helper herself and yet leave the mother as helpless and incompetent as before she was called in. The desire of the society is to achieve the exact opposite of this. The mother should be taught so that she may not only help herself in future, but so that she may also be helpful to her friends and neighbors. The nurse should be a sympathetic teacher and practical helper—not merely a "spoon-feeder."

The Plunket nurse should understand that while her services are available to every member of the community without charge, it is, nevertheless, desirable that parents

who can well afford to pay for help should be given the chance of doing so, and should be tactfully reminded that it is open to them to make a donation to the society's funds in appreciation of services rendered; further, that if they are not already members they can become so; and that where a mother has been helped, the society trusts she will do her best to hand on the knowledge she has acquired to friends and neighbors.

For all such intimations as the above the society has to depend on the discrimination, common sense, and tact of the nurse. Immeasurable harm can be done by an indiscreet or tactless woman in such matters.

In addition to the duties already referred to, Plunket nurses are expected to do what they can to further the society's health mission by such means as: (1) Practical talks and demonstrations to school girls on matters concerning their own health, or concerning the health of children, e, g., taking a baby into the school, where desired to do so, and telling and showing the girls all about it. (2) Talks and demonstrations to young women, mothers, nurses, etc., on matters concerning health and duty to the race.

In this connection it is impossible to define precisely what each nurse should do. One nurse may have special aptitude in certain directions, but may lack confidence in herself in other directions. All that the society wants is that each Plunket nurse will do her best to sympathetically carry on the health mission in the proper spirit. If the heart of the nurse is in the work—if she has a genuine, unselfish, patriotic interest in mother and child, and in the future of our race—she will succeed even if she does not happen to be capable of undertaking talks to assemblages of mothers or school girls in the first instance.

RULES DEFINITELY REGULATING THE CONDUCT OF PLUNKET NURSES IN RELATION TO—

The parents.—The services of the Plunket nurse in her special sphere of work are at the disposal gratis of all members of the community, rich or poor, who ask for them.

It is the nurse's first duty to inculcate and try to establish breast-feeding.

The nurse should educate and help parents and others in a practical way in the hygiene of the home and nursing with a view to conserving the health of the whole family while directing special attention to the needs of the mother and offspring.

The nurse should always try to stimulate and quicken the interest and self-reliance of parents in matters pertaining to the home, so that it may be regulated in a sensible and responsible way consistent with what is known at the present time as to the fundamental requirements of life.

The Plunket nurse must not recommend patent foods or nostrums of any kind.

The public.—The services of the nurse in her special sphere of work are at the disposal gratis of any member of the community, whether rich or poor, who chooses to apply to her directly or indirectly through any doctor or any member of the society.

When opportunity offers, the nurse should let it be known that the society is one for mutual help and that new members are always welcome.

The Plunket nurse shall not grant a newspaper interview or write to any newspaper, magazine, or journal without the express sanction of her committee. Plunket nurses shall not be allowed to communicate to the public any views in connection with the treatment of mother and child which are not consistent with the teachings of the society.

The medical practitioner.—It is expressly enjoined that where a medical man is in actual attendance the nurse is not to act without his consent.

The Plunket nurse must on no account undertake duties or assume responsibilities properly restricted to the medical profession. She is to act as nurse and domestic helper and teacher.

The nurse must always insist on a doctor being called in for any but the simplest cases of sickness. Further, where any ailment persists in spite of her having given due attention to the feeding and other hygienic requirements, medical aid must be sought. When advising the calling in of a doctor, the nurse shall in no case give the slightest hint as to what doctor is to be consulted.

As a safeguard against carrying infection nurses are not to attend homes where there are infectious cases, such as measles, whooping cough, and scarlet fever, or to receive at their offices persons coming from such infected homes.

GOVERNMENT PUBLIC-HEALTH WORK IN NEW ZEALAND.

New Zealand has a department of public health which supervises all public and private health agencies. It divides the country into 37 hospital districts, each controlled by a board composed of representatives elected by borough councils, town boards, county councils, etc.

The revenue of the boards is derived from local rates, Government subsidies, payment by patients, and voluntary contributions. The following condensed statement from the Report on Public Health and Hospitals and Charitable Aid, 1911-12, gives an idea of the scope of the work contemplated by the public-health scheme:

In all the larger hospital districts each board is provided with—

A base hospital.

An infectious-disease hospital.

Annexes or wards for consumptive patients in curable and incurable states.

A consumptive sanatorium.

Incipient mental wards.

An old people's home.

A chronic ward attached to old people's home.

A maternity ward. The four chief towns in New Zealand are provided with maternity hospitals under the control of the Government. It is hoped that in the course of the next few years all country hospitals will be provided with maternity wards.

Secondary hospitals. These are situated in the smaller towns and usually consist of some 10 to 20 beds. For special work or major operations it is the desire of the department and the boards that patients should be sent to the base hospital of the district.

A cottage hospital. Usually of some 2 to 6 beds, with a room attached for maternity cases. The function of these institutions should be more for first aid until the cases can with safety be transmitted to the secondary or base hospital.

The district nurse is a most important adjunct to our hospital system. For the most part, these nurses are sent to the more remote country districts—the back blocks—where their services as nurses or midwives are much sought. It is by means of the services of such officers that we hope to bring the back blocks more in touch with our hospital system, of which the district nurse is the outpost. It is the hope of the department and the boards that back-block settlers should provide cottages for these nurses, not only for them to live in, but with an extra room or so in which emergency cases can be treated until they can with safety be forwarded to the secondary hospital of the district, or which could be used for maternity cases.

The reports from the Government district nurses show that a rugged and varied service is often demanded. For instance, a call may come from the bush at midnight, perhaps a case of accident, when delay would be serious. The nurse is called upon to mount a horse and to ride in darkness for miles, over muddy, slippery roads, often so narrow that every step brings danger of a fall over a precipice. In the swamps her horse gets bogged, or, after a rain, has to swim a way out. The responsibility of the nurse in districts far from hospitals or medical aid has often developed an almost heroic initiative and courage.

The department has established a special nursing service for work among the Maoris. The nurses live among the natives, help them with advice and example to live a more hygienic life and to bring up their children in a healthy manner.

A system of Government registration of nurses has been in force since 1901.

The attitude toward midwives is one of encouragement, but the practice is strictly regulated. Only registered midwives are permitted to practice, and no person can be admitted to the register unless she is in possession of a certificate of training and of having passed an examination approved by the Government. One midwife to every 1,000 of population is regarded as a desirable proportion. To a certain extent in its maternity hospitals the Government supplies training places for midwives. A penalty is enforced by the Government for the occurrence of septic cases.

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CHILDREN'S BUREAU

JULIA C. LATHROP, Chief

LAWS RELATING TO
"MOTHERS' PENSIONS" IN THE
UNITED STATES, DENMARK
AND NEW ZEALAND

DEPENDENT CHILDREN SERIES, No. 1
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PUBLICATIONS OF THE CHILDREN'S BUREAU.

First Annual Report of the Chief, Children's Bureau.

[Bureau publication No. 1.] The Children's Bureau; a circular containing the text of the law establishing the bureau and a brief outline of the plans for immediate work. (Out of print.)

[Bureau publication No. 2.] Birth Registration; an aid in protecting the lives and rights of children; necessity for extending the registration area.

Bureau publication No. 3. Infant Mortality Series No. 1, Baby-saving Campaigns; a preliminary report on what American cities are doing to prevent infant mortality.

Bureau publication No. 4. Care of Children Series No. 1, Prenatal Care, by Mrs. Max West.

Bureau publication No. 5. Part 1 of Handbook of Federal Statistics of Children; number of children in the United States with their sex, age, race, nativity, parentage, and geographic distribution.

Bureau publication No. 6. Infant Mortality Series No. 2; New Zealand Society for Health of Women and Children; an example of methods of baby-saving work in small towns and rural districts.

Bureau publication No. 7. Dependent Children Series No. 1; Laws Relating to "Mothers' Pensions" in the United States, Denmark, and New Zealand.

CONTENTS.

	Page.
Letter of transmittal.....	5
Introduction:	
History of "mothers' pension" legislation in United States.....	7
Summary of the laws of the various States.....	9
The Danish and New Zealand widows' pension laws.....	11
Laws relating to "mothers' pensions" in United States:	
California.....	13
Aid to mothers in San Francisco.....	16
Commission to investigate mothers' pensions.....	17
Colorado.....	17
Operation of law.....	19
Idaho.....	19
Illinois.....	21
Operation of law in Cook County.....	23
Forms used in juvenile court of Cook County.....	24
Iowa.....	30
Massachusetts.....	31
Operation of law.....	33
Letter of State board of charity to overseers of poor.....	34
Michigan.....	36
Minnesota.....	39
Missouri.....	40
Operation of law in Jackson County.....	42
Forms used in juvenile court of Jackson County.....	42
Ordinance of St. Louis creating board of children's guardians.....	44
Nebraska.....	46
Nevada.....	48
New Hampshire.....	50
New Jersey.....	50
Forms adopted by State board of children's guardians.....	52
New York (Commission).....	55
Ohio.....	56
Oklahoma.....	58
Oregon.....	58
Pennsylvania.....	59
South Dakota.....	61
Utah.....	63
Washington.....	64
Forms used in juvenile court of King County.....	66
Wisconsin.....	69
Operation of law.....	72
Forms adopted by State board of control.....	72
Danish law regarding assistance to children of widows, 1913.....	76
New Zealand Widows' Pension Act, 1911.....	79
Amendment, 1912.....	84
Regulations.....	86
Forms.....	91
Operation of law.....	96
List of references on "mothers' pensions".....	98

LETTER OF TRANSMITTAL

U. S. DEPARTMENT OF LABOR,
CHILDREN'S BUREAU,
Washington, D. C., March 20, 1914.

SIR: I have the honor to transmit herewith a compilation of laws relating to "mothers' pensions" in 22 States of this country, and in Denmark and New Zealand, together with certain notes as to their operation, and a bibliography.

In 1913, more than half the State legislatures in session that year considered bills providing public aid for mothers of young children otherwise dependent. In 17 of these (California, Idaho, Iowa, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, Ohio, Oregon, Pennsylvania, South Dakota, Utah, Washington, and Wisconsin) "mothers' pension" laws were passed; in 2 (Illinois and Missouri), existing laws were revised and amended; in Oklahoma the "school scholarship" provision was reenacted in the revised school law; while in California and New York laws were passed providing for commissions to study the question of "mothers' pensions." In 6 other States (Arizona, Connecticut, Indiana, Kansas, North Dakota, and Tennessee) bills were under consideration, but failed of passage. One additional State (Colorado) had adopted a "mothers' compensation act" at the November election, 1912, which became effective January, 1913. There are now in operation in 21 States (including Oklahoma) laws providing aid to mothers in varying sums and under varying conditions. The earliest of these laws were secured in 1911.

Thus it will be seen that in two years there has come into existence in States embracing half the population of the country a type of legislation whose purpose is admittedly uniform, namely, to secure for young children home life and the personal care of a good mother. No one quarrels with this purpose. On the other hand, the opinions of experts on social betterment do not agree as to the wisdom of trying to secure this purpose through so-called pension legislation, as will be seen by an examination of the discussions referred to in the attached bibliography. The methods and standards prescribed in

the different States vary. It is impossible that all should equally valuable in serving their common purpose. At the present time it is impracticable for this bureau to undertake any field of the operation of these laws (even were it not premature), in view of the immediate legislative importance of the matter and various bearings, it is believed that the following compilation of American texts, together with the New Zealand law passed in 1908 and a translation of the Danish law passed in 1913, added for purposes of comparison, will prove timely and useful. The bibliography, while not exhaustive, contains most of the significant material.

The preparation of the bulletin is the work of Miss Lau Thompson, librarian of the bureau.

Respectfully submitted.

JULIA C. LATHROP, *Chief*

Hon. WILLIAM B. WILSON,
Secretary of Labor.

INTRODUCTION.

HISTORY OF "MOTHERS' PENSION" LEGISLATION IN THE UNITED STATES.

The earliest of the laws providing for the care of dependent children in their own homes out of public funds was that of Missouri, approved April 7, 1911, which provided for an allowance to mothers "whose husbands are dead or prisoners, when such mothers are poor and have a child or children under the age of 14 years." This law went into effect in June, 1911. By a population limitation it was made applicable only to Jackson County, in which Kansas City is situated. In the same year, following upon the report of a municipal commission on delinquent, dependent, and defective children in St. Louis, a law was passed whereby St. Louis was given power to establish by city ordinance a board of children's guardians, with authority to board out children to their own mothers. Such an ordinance was passed by St. Louis in July, 1912.

In Illinois in the same year a similar but more comprehensive "funds to parents act" was passed on June 5, 1911. This law, which went into operation on July 1, 1911, provided that—

If the parent or parents of such dependent or neglected child are poor and unable to properly care for the said child, but are otherwise proper guardians and it is for the welfare of such child to remain at home, the court may enter an order finding such facts and fixing the amount of money necessary to enable the parent or parents to properly care for such child, and thereupon it shall be the duty of the county board, through its county agent or otherwise, to pay to such parent or parents at such times as said order may designate the amount so specified for the care of such dependent or neglected child until the further order of the court.

The next State to legislate on the subject was Colorado, which adopted by popular vote the "mothers' compensation act" submitted by petition at the November election in 1912. This law, which followed in general the provisions of the Illinois funds to parents act, became effective, upon proclamation of the governor, on January 22, 1913.

For many years the State of California, under section 22 of article 4 of the constitution, has allowed to institutions for the care of dependent orphans the sum of \$100 per year, and for dependent half orphans and abandoned children the sum of \$75 per year. Prior to

1913, in the absence of any law specifically authorizing grants from public funds for the maintenance of dependent children in their own homes, such aid was being given in San Francisco, Los Angeles, and elsewhere under a liberal interpretation of section 21 of the juvenile court act, which permits the court, in the order providing for the care of a dependent or delinquent child, when the parent is unable to pay for the maintenance of such child, to direct that an amount not exceeding \$11 a month be paid out of the county treasury. Wherever it seemed desirable, the private charitable organizations which accepted the commitment of the children permitted them to remain in their own homes, giving to the mother the amounts ordered by the court. Semiannually the counties then made demand on the State for the amounts expended in behalf of half orphans within the limits prescribed by section 22 of the constitution. The law of 1913 authorizes the payment of this State subsidy for the maintenance of half orphans in their own homes, together with a like amount out of local funds.

In Wisconsin, also without definite State enactment, the practice of granting public aid to poor mothers for the care of children in their own homes had been started in Milwaukee County under a resolution of the county board of March 26, 1912, which set aside a special fund of \$5,000 to be used under the supervision of the juvenile court of Milwaukee in giving financial assistance to the families of dependent and neglected children, instead of committing the children to the Milwaukee County Home for Dependent Children. The law passed in 1913 authorizes such aid in all counties of the State and makes a State appropriation to meet half of the expense.

Several of States in their compulsory education laws have made provision for furnishing books and clothing to poor children who must by law attend school. The laws of two of these States, Oklahoma and Michigan, are here included, because they differ from the usual type of school-aid laws in that they make provision, in addition, for the payment of money for the support of the children. The Oklahoma law, first enacted April 10, 1908, provides for a "school scholarship," equivalent to the earnings of the child, to be paid by the county, upon recommendation of the school authorities, to children of widowed mothers when the earnings of such children are necessary to the support of the mother. The Michigan law, passed April 29, 1911, provides for the payment, out of school funds, of a sum not exceeding \$3 a week to enable children of indigent parents to attend school.

In 1913, of the 42 State legislatures in session, 27 had before them bills providing for the support of dependent children in their own homes out of public funds. Illinois completely revised its law of 1911, incorporating into it the regulations found necessary in the

administration of the law during the first year and a half of its operation. Missouri extended the provisions of its law to include women whose husbands were in insane asylums or State colony for the feeble-minded. California, Idaho, Iowa, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, Ohio, Oregon, Pennsylvania, South Dakota, Utah, Washington, and Wisconsin enacted new laws. (Massachusetts had in 1912 appointed a commission on the support of dependent children of widowed mothers.) Two States, California and New York, passed laws creating commissions to study the question of mothers' pensions. Oklahoma reenacted the "school-scholarship" provision in its revised school law. In six other States—Arizona, Connecticut, Indiana, Kansas, North Dakota, and Tennessee—bills were under consideration but failed of passage.

SUMMARY OF THE LAWS OF THE VARIOUS STATES.

The purpose underlying all these laws is that of preventing the breaking up ~~of the~~ home when on account of death or disability the support of the natural breadwinner of the family is removed. But the methods adopted to secure this end vary widely in the different States, as will be seen from the following summary of the laws:

Persons to whom aid may be given.—The law applies to any parent who on account of poverty is unable to care properly for a dependent or neglected child but is otherwise a proper guardian, in Colorado and Nebraska; to any parent or grandparent in Nevada; to any parent or guardian in Wisconsin. In the other States it applies only to mothers. In California, New Jersey, Oklahoma (and also in St. Louis) the mother must be a widow to receive the benefits of the act. In the remaining States not only widows but the following other classes of mothers with dependent children are included: mothers whose husbands are in prison in Idaho, Iowa, Minnesota, Missouri, Ohio, Oregon, South Dakota, and Washington; mothers whose husbands are in State insane asylums in Iowa, Minnesota, Missouri, Oregon, and Washington; mothers whose husbands are totally incapacitated, physically or mentally, in Illinois, Minnesota, Ohio, Oregon, South Dakota, and Washington; deserted wives in Michigan, Ohio (if deserted for three years), Pennsylvania, and Washington (if deserted for one year). In Michigan are included also unmarried and divorced mothers. In Colorado, Oregon, and Wisconsin, if the person having custody of the child is not regarded as capable of expending the aid wisely, the court may order it to be paid to some other person for the benefit of the child.

Conditions on which aid is given.—(a) *Degree of poverty.*—The condition of receiving aid under these laws is uniformly that of poverty, with certain definitions added in some of the laws. In Washington the mother must be destitute; in New Hampshire and Utah she must be dependent entirely on her own efforts for support; in Oregon, wholly or partly dependent; in Illinois she may not own real property or personal property other than household effects. In Idaho, Illinois, Missouri, New Hampshire, Ohio, South Dakota, and Utah the aid must in the judgment of the court be necessary to save the child from neglect; in New Jersey, from becoming a public charge.

(b) *Home conditions.*—In most of the laws the requirement is made that the mother is a fit person, morally and physically, to bring up her children and that it is for the welfare of the child to remain at home. In Idaho, Illinois, Missouri, New Hampshire, Ohio, South Dakota, and Utah it is made conditional that the child or children be living with the mother and that the mother shall not work regularly away from home. In South Dakota she may not be absent for work more than one day a week; in Illinois and Ohio the amount of time is left to the discretion of the court.

(c) *Residence.*—In Washington and Minnesota one year's residence in the county is required; in Idaho, Missouri, New Hampshire, Ohio, and Utah two years' residence; in Illinois and Pennsylvania three years' residence. Some of the States require "legal residence" in the State; Minnesota, two years' residence; California and Massachusetts, three years; California and Illinois require, in addition, that applicant be a citizen of the United States.

Age of child.—The maximum age of a child on whose account an allowance may be made is 14 years in California, Illinois (may be extended to 16 years if child is ill or incapacitated for work), Iowa, Massachusetts, Minnesota, Missouri, South Dakota, and Wisconsin; 15 in Idaho, Utah, and Washington; 16 in Colorado, New Hampshire, New Jersey, Oklahoma, and Oregon; 17 in Michigan; and 18 in Nebraska and Nevada. The legal working age is the limit in Ohio and Pennsylvania.

Amount of allowance.—The maximum allowance for one child is \$2 a week in Iowa, \$3 a week in Michigan. It is \$9 a month for one child, \$14 for two children, and \$4 for each additional child in New Jersey; \$10 a month for each child in Minnesota and Nebraska; \$10 a month for one child and \$5 for each additional child in Idaho, Missouri (i. e., Jackson County), New Hampshire, and Utah; \$10 for one child and \$7.50 for each additional child in Oregon; \$12 for one child and \$4 for each additional child in Wisconsin (amount may, however, be temporarily increased in case of sickness or unusual conditions); \$12 for one child, \$20 for two children, \$26 for three children, and \$5 for each additional child in Pennsylvania; \$12.50 for each child in California (\$6.25 a month by the State and a like amount by the city or county); \$15 for one child and \$5 for each additional child in Washington; \$15 for one child and \$7 for each additional child in Ohio and South Dakota; \$15 for one child and \$10 for each additional child in Illinois (not to exceed in all \$50 for any one family). In Colorado, Massachusetts, and Nevada no maximum is set, but the amount must be sufficient to care properly for the child, with the restriction in Nevada that it may not exceed what it would cost to maintain and educate the child in a county or State home. In Oklahoma the "school scholarship" is the equivalent of the wages of the child. In the city of St. Louis the maximum is \$3.50 a week, which may be increased temporarily on account of sickness or other exceptional conditions.

Administration.—The law is administered by the juvenile court or some other county court with similar functions in Colorado, Illinois, Idaho (probate court), Iowa, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Jersey (common pleas), Ohio, Oregon, South Dakota, Utah, Washington, and Wisconsin; by the county commissioners, upon advice of the school board, in New Hampshire; by the city or town overseers of the poor in Massachusetts; and by an unpaid board of five to seven women residents of each county, appointed by the governor, in Pennsylvania. In Ohio, Nebraska, and South Dakota the order granting aid is good only for six months unless renewed. In Idaho, Illinois, Minnesota, Missouri, Nevada, New Hampshire, Ohio, Utah, and Washington the court may at any time modify or discontinue the allowance. In California supervisory powers are given to the State board of control, which can appoint three State

children's agents, with an unpaid advisory committee of three persons in each county; in New Jersey all cases granted aid are under the supervision of the State board of children's guardians. In Massachusetts certain supervisory powers are given to the State board of charity; in Wisconsin to the State board of control. In Illinois and Ohio the law requires that visits shall be made to the homes from time to time by the probation officers; in Massachusetts that the overseers of the poor shall visit the families at least once in every three months and reconsider each case at least once a year.

Source of funds.—In all the States except California, Massachusetts, Pennsylvania, and Wisconsin the funds for carrying out the provisions of these laws come out of the county treasury. In Illinois these are raised by a special tax of not exceeding three-tenths of a mill on the dollar of the taxable property of the county, and in Ohio by a tax not exceeding one-tenth of a mill. In California reimbursement to the extent of \$75 a year is made to the local authorities by the State; in Massachusetts one-third of the amount in settled cases and the whole amount in unsettled cases. In Pennsylvania and Wisconsin the State bears one-half of the expense within the limits of the appropriation, which is apportioned according to the population of the counties.

Penalty for fraud.—Penalties are provided for procuring or attempting to procure an allowance fraudulently in Idaho, Illinois, Missouri, Nevada, Ohio, Pennsylvania, South Dakota, Utah, and Washington.

THE DANISH AND NEW ZEALAND WIDOWS' PENSION LAWS.

The laws of both Denmark and New Zealand, while having the same general purpose as the laws of the various American States, illustrate somewhat different methods of dealing with the problem.

Under the Danish law, which became effective January 1, 1914, every widow who is the mother of a child or children under 14, whose property and income is less than a certain amount, proportionate to the size of her family, is entitled to a public grant toward the support of such children. The amount of the allowance is graduated by the age of the children, the highest rate being paid for children under 2 years of age. In exceptional circumstances the aid may be extended until the child is 18 years old. Certain requirements are made as to the fitness of the mother and the home conditions. The aid is expressly stated to be nonpauperizing and its continuance is made conditional upon the mother keeping off the poor relief. Half of the expense of the aid is borne by the State, the remainder by the commune in which the widow has permanent residence.

The New Zealand law, which went into operation January 1, 1912, provides a pension for any widow of good moral character with dependent children under 14. (Extended in 1912 to include also wives of inmates of insane hospitals.) The law, while general in terms, is made to apply only to those who need assistance by providing for the deduction from the pension of £1 for every pound which the widow's income exceeds a certain amount. The aim, as in the Danish law, is to prevent destitution instead of making this condition a requirement for the granting of assistance. Applications for pensions are made

to the registrars of old-age pensions and are granted or refused upon hearing before a magistrate. Each grant is for a period of 12 months, at the end of which the circumstances of the pensioner are reviewed. The whole expense of the pension is borne by the State, and payments are made monthly through the post office. Upon the death of the widow application may be made for continuance of the pension to the guardian of the children. The National Provident Fund Act of New Zealand, passed in 1910, a year before the Widows' Pension Act, also makes special provision for the support of dependent children by providing for the payment, on the death of a contributor, of a weekly allowance to the widow so long as any child is under 14 years of age, due after contributing for five years (not therefore yet in operation).

LAWS RELATING TO "MOTHERS' PENSIONS" IN UNITED STATES.

CALIFORNIA.

[Constitution, Article IV.]

Sec. 22. The legislature shall have the power to grant aid to the institutions conducted for the support and maintenance of minor orphans, or half orphans, or abandoned children, * * * such aid to be granted by a uniform rule, * * * *Provided, further,* That whenever any county, or city and county, or city, or town, shall provide for the support of minor orphans, or half orphans, or abandoned children, * * * such county, city and county, city, or town shall be entitled to receive the same pro rata appropriations as may be granted to such institutions under church or other control. An accurate statement of the receipts and expenditures of public moneys shall be attached to and published with the laws at every regular session of the legislature. * * *

For many years under this provision the State has been paying to institutions \$100 a year for the care of orphans and \$75 a year for half orphans and abandoned children. Such payments are authorized also to any city, town, or county providing for such dependents.

[Laws 1913, chap. 323.]

An Act To amend sections 2283, 2285, 2286, 2287, and 2289 of the Political Code relating to the support and maintenance of orphans, half orphans, and abandoned children.¹

The people of the State of California do enact as follows: **SECTION 1.** Section 2283 of the Political Code of the State of California is hereby amended so as to read as follows:

2283. Appropriation for care of dependent children—Aid to mothers.—There is hereby appropriated out of any money in the State treasury not otherwise appropriated, to each and every institution in this State conducted for the support and maintenance of needy minor orphans, half orphans, or abandoned children, and to each and every county, city and county, city, or town maintaining such orphans, half orphans, or abandoned children, or any or all of such classes of persons, aid as follows: For each whole orphan supported and maintained in any such institution, not in excess of one hundred dollars per annum; and for each half orphan or abandoned child, not in excess of seventy-five dollars per annum; but each abandoned child must have been an inmate thereof for one year prior to receiving any support as provided in this chapter: *Provided,* That in addition to the amount paid by the State for each half orphan maintained at home by its mother, the county, city and county, city, or town may pay for the support of such half orphan an amount equal to the sum paid by the State: *And provided further,* That in any case where any such half

¹ For a discussion of the provisions of this act see paper by W. Almont Gates, secretary of the State Board of Charities, in the Proceedings of the National Conference of Charities and Correction, 1913, pp. 306-311.

orphan is denied aid by the county, upon a petition setting forth the facts in full as to the necessity of aid, verified by five reputable citizens of the county, city and county, city, or town, the mother of such child shall have the right of appeal direct to the State board of control for aid for her child, and should her appeal be sustained by said board payment must be made for the child as above provided.

SEC. 2. Section 2285 of the Political Code of the State of California is hereby amended so as to read as follows:

2285. Books to be kept by institutions, cities, and counties.—Every institution, county, city and county, city, or town entitled to aid under this chapter must keep the following books, which at all times must be open to the State board of control or to any person appointed by them to examine the same, or to any committee of the legislature, or to any clerk or officer thereof duly authorized to make such examination:

1. A book in which must be entered the date of admission, name, age, sex, and place of birth of each and every orphan, half orphan, and abandoned child, who is or may hereafter be received or admitted into such institution, or to county aid, and the date of discharge of any such child, when such discharge is made, the parentage, if known; the estate, if any, to which the child is heir, and the insurance, if any, on the father's or mother's life; so far as can be ascertained, the place where either parent or both died, the nativity of the parents, where married, the marriage certificate, where recorded, when they came to California, place of residence in California, and habits of sobriety.

2. A book entitled "monthly accounts." In it must be entered on the debtor side, all the moneys received from any and all sources segregated under the proper heads; on the credit side must be entered all disbursements made, specifying for what purposes made, and the amount entered in detail so disbursed, segregated under their proper heads.

3. A pay roll of the employees, and the amounts disbursed to each.

4. A book in which must be entered in detail the amounts paid for the specific support of every orphan, half orphan, or abandoned child and the date of such payments.

5. A transcript of the books and pay roll, verified under oath by the manager or person in charge of such institution entitled to or claiming State aid under this chapter, must be made and forwarded to the State board of control at the time of making demand or presenting claim for State aid, covering the time for which such claim or demand for State aid is made.

6. A list of all the inmates other than employees or orphans supported wholly or in part by any institution presenting a claim for State aid under this chapter, must also be forwarded with such claim for aid.

SEC. 3. Section 2286 of the Political Code of the State of California is hereby amended so as to read as follows:

2286. Supervision by board of control—Children's agents.—The State board of control is authorized, in behalf of the State, at any time to inquire, either in person or by authorized agent into the management of any such institution; and any institution refusing, upon due demand, to permit such inquiry or to comply with regulations established by said board for the proper maintenance and care of children receiving State aid must not thereafter receive any aid under this chapter until it has complied with all requirements. To carry out the provisions of this act, the State board of control may appoint three children's agents who shall, under the rules of said board, visit the homes and the institutions in which are children to whom State aid is being given or for whom aid is being asked, to obtain such information as the board may need in carrying out the provisions of this chapter. Such agents shall receive their necessary

traveling expenses and a salary of one hundred and seventy-five dollars per month, which salary shall be paid in the same manner and at the same time as the salaries of other State officers. All expenses incurred in visiting said asylums and homes, when there are no other available funds, may be audited and allowed by the State board of control out of the appropriation for support of orphans, half orphans, and abandoned children. In addition an advisory committee of three persons serving without pay or expense to the State may be appointed by the board of control, to act in any county in conjunction with the children's agents.

SEC. 4. Section 2287 of the Political Code of the State of California is hereby amended so as to read as follows:

2287. Regulations governing claims for State aid.—Every claim for aid under this chapter must be presented to and audited and allowed by the State board of control. Such claim must contain:

1. The name and location of the institution making the claim, or the name of the county.

2. The name of the person or persons having charge or control of the institution or of the child.

3. The number of orphans, half orphans, or abandoned children therein, in the case of an institution.

4. The date of admission and age of each child.

5. The amount, if any, that the institution is receiving for the specific support of any orphan, half orphan, or abandoned child therein. Such claim, and the statements therein contained, must be verified by the person or persons, or some of them, in charge of such institution, or in the case of counties, by the county officers in charge of the distribution of aid, and the State board of control may, in its discretion, require the production of the books of such institution or county in support of such claim.

SEC. 5. Section 2289 of the Political Code of the State of California is hereby amended so as to read as follows:

2289. In order that the provisions of this chapter shall not be abused, it is hereby declared:

1. That no institution which has less than twenty inmates of either or all of the classes mentioned in section twenty-two hundred and eighty-three must be deemed an institution for the support and maintenance of minor orphans, half orphans, or abandoned children, within the intent and meaning of this chapter.

2. That no child over the age of fourteen years shall be deemed a minor orphan, half orphan, or abandoned child, within the intent and meaning of this chapter.

3. That no child for whose specific support there is paid to any such institution the sum of ten dollars or more per month shall be deemed a minor orphan, half orphan, or abandoned child within the intent and meaning of this chapter.

4. That no child whose parent or parents have not resided in this State for at least three years prior to the application for aid, or whose parent or parents have not become citizens of this State shall be deemed a minor orphan, half orphan or abandoned child within the intent and meaning of this chapter.

5. That no child maintained in an institution for whom a bona fide offer of a proper home has been made shall be considered eligible for further State aid: *It is further provided, however,* That no institution shall be required to surrender a child to any person of religious faith different from that of the child or the parents of the child.

Approved May 26, 1913. In effect August 10, 1913.

AND IN MONTEZUMA BY SAN FRANCISCO.

It is the purpose of this act and act amend such mothers for the support of dependent minor children in their own homes by the juvenile courts of Los Angeles and San Francisco Counties and in a small extent elsewhere under a state interpretation of section 21 of the juvenile court act of 1909, amended 1911, which provides that:

Any order providing for the custody of a dependent or delinquent person may provide that the expense of maintaining such person shall be paid by the parent or parents or guardian of such person and in such case shall state the amount to be so paid. . . . If it be found, however, that the parent or parents or guardian of a dependent or delinquent person is unable to pay the whole expense of maintaining such person the court may, in the order providing for the custody of such person, direct such additional amount as may be necessary to support such person to be paid from the county treasury of the county for the support of such person, the amount so ordered to be paid from the treasury of said county not to exceed, in case of any one person, the sum of seven dollars per month: *Provided, further,* That no order for the payment of all or part of the expense of support and maintenance of a dependent or delinquent person from the county treasury shall be effective for more than six months, unless a new order is secured at the expiration of that period. The court may thereafter set aside, change or modify any order herein provided for." [Laws 1911 p. 671.]

In San Francisco this aid was given by the juvenile court through the medium of the child placing agencies which, while accepting commitment and responsibility for the children, left them in their own homes. In such cases the home and family were supervised and visited regularly by representatives of the society who reported to the court from time to time upon the character of the home conditions. The amounts ordered paid were secured by the charitable society upon its demand for service rendered in providing care for the children and then were turned over by it to the parent or parents. Semiannually the county made demand on the State for the amount expended in behalf of dependent orphans, half orphans, or abandoned children. In June, 1912, the Children's Agency of the San Francisco Associated Charities had under its care 201 children who had been committed by the court and were being boarded with parents or relatives. (As against 181 in 1911.) In its annual report for 1912 the society explained its refusal to accept other commitments urged upon it on the ground that the State allowance—\$6.25 a month for each half orphan—was inadequate, unless supplemented from other sources, to maintain a proper standard of life for the family, without requiring the mother to go out to work during the hours that her children were at home, thus defeating the main purpose of the aid.

To carry out the provisions of the new law San Francisco opened a widows' pension bureau in the city hall in September, 1913. Two hundred and twenty-three widowed mothers who had been receiving aid through the juvenile court were transferred to the new bureau but continued to receive help through the juvenile court pending reinvestigation and the procuring of evidence necessary to obtain State aid under the new law. Of these 223 cases, 114 were found to be entitled to aid from the pension bureau. One hundred and nine could not be considered for the following reasons: 47 parents not citizens; 20 improper homes; 7 desertion cases; 3 not living with mother; 24 self-supporting; 5 married a second time; 3 not living in county. These 223 cases were handled by the juvenile court at a total expense of \$4,506.20. The 114 cases accepted by the pension bureau are being cared for at a total expense of \$2,432.25 (\$1,762.50 State, plus \$669.75 county) per month. The juvenile court is continuing to pay in the cases where the parents are not citizens, to the amount of \$975.50 per month, pending further action on this question by the board of supervisors. Up to August 2, 1913, the State advanced \$6.25 for each half orphan in need of such aid, but in keeping with paragraph 4 of section 5 of Laws of 1913, chapter 222, the attorney general of the State has decided that from that date on the State would assume no further responsibility in any cases where citizenship of parents could not be proven. This decision involves also children in institutions and under the care of the various agencies whose parents were never naturalized. These children have, in nearly all cases, been cared for jointly by the city and county and by the State (\$6.25 State and \$4.75 county) and should the county now have to assume the whole cost, this will materially diminish the amount of money that will be available this year for aiding widows out of the

general fund of \$200,000 appropriated by the city and county for the care of all dependent and delinquent children. Up to January 1, 1914, 545 (328 new applications) had applied for aid. For further discussion of the situation in San Francisco see "Notes on widows' pensions act as administered in San Francisco," by Margaret C. Nesfield, director of the widows' pension bureau, San Francisco.

COMMISSION TO INVESTIGATE MOTHERS' PENSIONS.

Various proposals for "mothers' pension" legislation were before the California Legislature in the session of 1913. In order to have at hand more exact information on the subject than was available at that time, the legislature passed the following law providing for a commission to study the question of mothers' pensions (as well as that of old-age pensions) and report at the next regular session in 1915.

[Laws 1913, chap. 681.]

An Act Authorizing the governor to appoint a commission to investigate and report at the forty-first session of the legislature concerning the adoption of a system of old-age insurance and pensions, and mothers' pensions, and making an appropriation therefor.

The people of the State of California do enact as follows: SECTION 1. *Duties of commission—Membership—Report.*—The governor of California is hereby authorized and requested to appoint a commission¹ consisting of five persons, citizens of this State, one of whom shall be a member of the State board of control, to investigate and consider the various systems of old-age insurance, old-age pensions or annuities, also mothers' pensions or mothers' compensations now in use in different counties of this or other States, and as may be proposed or as are now in operation in other States of this country or elsewhere abroad, and to make a full and complete report of its findings with all data so obtained, properly tabulated, to the legislature at its next regular session. Said commission shall report also statistics showing the probable expense to the State of various systems, or of any system that it may recommend for adoption together with any bills of its own relating to this subject that may be deemed expedient.

SEC. 2. *Appropriation.*—There is hereby appropriated out of the general fund not otherwise appropriated, and the controller is herewith authorized and directed to issue his warrants for same from time to time, and the treasurer is likewise authorized and directed to pay the same on presentation of said warrants, the sum of three thousand dollars or any portion thereof, as may in the judgment of the commission be required to complete its work under the provisions of this act.

Approved June 16, 1913. In effect August 10, 1913.

COLORADO.

[Laws 1913, pp. 694-696. Passed by popular vote, November 5, 1912.]

An Act To amend an act entitled "An act concerning dependent and neglected children, approved April 2, 1907."²

Be it enacted by the people of the State of Colorado: SECTION 1. That section 7 of an act entitled "An act concerning dependent and neglected children, approved April 2, 1907," be and the same is hereby amended so as to read as follows:

SECTION 7. Any dependent child committed to the State Home for Dependent and Neglected Children shall, as to its care and disposition by said home, be

¹ Commission not yet appointed (Feb. 24, 1914).

² For the discussion of the provisions of this act see article by Judge Lindsey in the Survey, Feb. 15, 1913.

subject to any special order of the court making such commitment, provided such order be made at the time of such commitment. If the parent or parents of such dependent or neglected child are poor and unable to properly care for such child, but otherwise are proper guardians, and it is for the welfare of such child to remain at home, the court may enter an order finding such facts and fixing the amount of money necessary to enable the parent or parents to properly care for such child, and thereupon it shall be the duty of the board of county commissioners, and in those cities and counties operating under Article XX of the constitution it shall be the duty of the department and authority performing that part of the functions of a board of county commissioners, or vested with power for the relief of the poor, to pay such parent or parents, or, if it seems for the best interest of the child, to some other person designated by the court for that purpose, at such times as said order may designate, the amount so specified, or when so ordered by the court, its equivalent in supplies and assistance, for the care of such dependent or neglected child until the further order of the court. The juvenile court in counties of over 100,000 population, and the county court in all other counties, shall appoint proper persons for the purpose of investigation, visitation, the keeping of records and the making of reports in cases requiring relief under this act. The details as to the number of such investigators, their rights, duties and powers in addition to that of investigators of such cases, their compensation, the limitations thereon and the authority of the county or city and county required to provide for such compensation shall be as provided by law for the employment of probation officers in such juvenile and county courts. It shall be the duty of the clerk of such juvenile or county courts, on or before December 1, 1912, and on or before the first day of July of each year thereafter, to submit to such county board or other proper authority a report of all cases receiving relief under this act, and an estimate of the sum necessary to be placed at its disposal for complying with the provisions of this act. A copy of such report shall be filed with the State board of charities and corrections. If the State home is unable to provide any child with a family home through voluntary adoption within six months from the time of its commitment, then as far as possible and if for the best interest of the child it shall be its duty to provide for the boarding out of said child in a suitable family home until such time as it may be adopted or shall have reached the age of sixteen years. Petitions and commitments under this act shall state the religious belief of parents, if known, and if not known the court shall endeavor to ascertain such fact, and family homes to which children are committed shall, as far as practicable, conform to such religious belief. On or before December 1, 1912, and on each July 1st next thereafter, before the convening of the succeeding general assembly, it shall be the duty of the superintendent of said home to submit to the governor and the State board of charities and corrections a detailed report of such boarding out of said children in family homes and an estimate as near as may be of the annual sum necessary for the maintenance of said boarding-out system and visitation officers employed by said State home in connection therewith. The governor shall transmit such estimate to such succeeding general assembly, which is hereby directed by the people of this State to appropriate from the State treasury a sum sufficient for the boarding out and visitation of said children, and otherwise carrying into effect the provisions of this act. Any of said courts enforcing the provisions hereof shall have the right to proceed as for contempt of court against officials who willfully refuse to comply with its orders directing their compliance with the provisions hereof; provided the sums paid out under this act shall not exceed

age of fifteen (15) years, and if she has more than one child under the age of fifteen (15), it shall not exceed the sum of ten dollars (\$10.00) a month for the first child and five dollars (\$5.00) a month for each of the other children under the age of fifteen years.

SEC. 3. *Conditions of allowance.*—Such allowance shall be made by the probate court and only upon the following conditions: (1) The child or children, for whose benefit the allowance is made, must be living with the mother of such child or children; (2) the allowance shall be made only when in the absence of such allowance, the mother would be required to work regularly away from her home and children, and when by means of such allowance, she will be able to remain at home with her children; (3) the mother must, in the judgment of the probate court, be a proper person, physically and mentally, for the bringing up of her children; (4) such allowance shall, in the judgment of the court, be necessary to save the child or children from neglect; (5) no person shall receive the benefit of this act who shall not have been a resident of the county in which such application is made for at least two years next before the making of such application for such allowance: *Provided*, That the provisions of this act shall not apply to any child which has property of its own sufficient for its support.

SEC. 4. *Allowance paid out of county funds.*—Whenever the probate court shall determine that an allowance under this act shall be made, it shall make an order to that effect which order, among other things, shall set out in full the name of the mother, her place of residence, the names and ages of each of the children, and the amount allowed to each child, and upon presentation of such order, the county commissioners shall direct monthly warrants to be drawn therefor, which warrants shall be paid from the general funds of the county.

SEC. 5. *When allowance shall cease.*—Whenever any child shall reach the age of fifteen (15) years, any allowance made to the mother of such child for the benefit of such child shall cease. The probate court may, in its discretion, at any time before such child reaches the age of fifteen (15) years, discontinue or modify the allowance to any mother and for any child. If such husband shall have been confined in the Idaho State penitentiary, such allowance shall cease on his discharge or parole and whenever any woman on whose account any allowance shall have been made under the provisions of this act, shall marry, such allowance shall cease.

SEC. 6. *To whom law does not apply.*—The provisions of this law shall not apply to any woman, whose husband is not dead or who is not confined in the Idaho State penitentiary.

SEC. 7. *Penalty for fraud.*—Any person procuring, or attempting to procure, any allowance for a person not entitled thereto, shall be deemed guilty of a misdemeanor and on conviction thereof, shall be punished by a fine of not less than one hundred dollars (\$100.00) nor more than five hundred dollars (\$500.00), or by imprisonment in the county jail, for a period of not more than one year, or by both fine and imprisonment.

SEC. 8. *Motion to set aside allowance.*—In each case where an allowance is made to any woman under the provisions of this act a judgment entry to that effect shall be entered upon the records of the probate court making such allowance and it shall be the right of any tax-paying citizen at any time to file a motion to set aside such judgment, and on such motion the probate judge shall hear evidence without a jury and his decision shall be final.

SEC. 9. *Repeal.*—All acts and parts of acts in conflict with this act, are, in so far as they conflict, hereby repealed.

Approved March 5, 1913.

ILLINOIS.

[Laws 1913, pp. 127-130.]

An Act To provide for the partial support of mothers whose husbands are dead or have become permanently incapacitated for work by reason of physical or mental infirmity, when such mothers have children under fourteen years of age, and are citizens of the United States of America and residents of the county in which application for relief is made. And, also, to provide for the probationary visitation, care and supervision of the family for whose benefit such support is provided.

Be it enacted by the people of the State of Illinois, represented in the general assembly: SECTION 1. *Jurisdiction.*—The juvenile court, or where there is no juvenile court, the county court in the several counties in the State, shall have original jurisdiction in all cases coming within the terms of this act.

SEC. 2. *Application for relief.*—A woman whose husband is dead or whose husband has become permanently incapacitated for work by reason of physical or mental infirmity, may file an application for relief under this act, provided such woman is a citizen of the United States of America and has a previous residence for three years in the county where such application is made and is the mother of a child or children.

SEC. 3. *Official investigation and report.*—Whenever an application for relief is filed the home of the applicant shall be visited by an officer of the court having jurisdiction of the matter, and the facts set forth in such application shall be investigated by such officer under the direction of the court, and a report and recommendation of the approval or disapproval of such application shall be made in writing by such officer to the court without any unnecessary delay.

SEC. 4. *Petition, form of.*—After the investigation of such application for relief by an officer of court and the filing of the report and recommendation thereon of such officer, such officer of court or any reputable and responsible person who has a residence in the county may file with the clerk of the court having jurisdiction of the matter, a petition in writing duly verified by affidavit setting forth such facts as are necessary under this act to give the court jurisdiction of the parties and of the subject matter, and setting forth such other facts, which, when found by the court to be true, shall be the basis upon which, the order of relief is entered. It shall be sufficient that the affidavit is upon knowledge, information and belief. A separate petition shall be filed for each child. The mother of such child and the county board of the county in which the petition is filed shall be made parties respondent to such petition.

SEC. 5. *Summons.*—Upon the filing of such petition a summons returnable not less than three days nor more than ten days after the date thereof shall issue to the respondents named in such petition requiring the mother with such child and all the respondents to appear at a place and time stated in the summons, which time shall be on the return day of such summons.

SEC. 6. *Service.*—Service of summons shall be made in the same manner as is provided for the service of a summons in an act entitled "An act to regulate practice in courts of chancery," approved March 15, 1872, in force July 1, 1872.

SEC. 7. *New process.*—Whenever process shall not be returned executed on or before the return day thereof, the court may direct the clerk to issue an *alias*, *pluries* or other process, returnable at a time ordered by the court.

SEC. 8. *Appearance—Hearing.*—The filing of a written appearance by a respondent shall render the service of summons on such respondent unnecessary. The court shall proceed to hear the cause upon the return day of the summons or upon a day thereafter to be fixed by the court without the formality of the

respondents filing answers: *Provided*, All the respondents have either been served with summons or have their written appearance in said cause.

SEC. 9. *Hearing—Order of payment—Duty of county board.*—Upon the hearing in court of a petition under this act, the court, being fully advised in the premises finding the facts alleged in the petition to be true, may make an order upon the county board of the county to pay to the mother of the child or children in whose behalf the petition or petitions are filed an amount of money necessary to enable such mother to properly care for such child or children. It thereupon shall be the duty of the county board, through its county agent or otherwise, to pay to such mother at such times as said order may designate the amount so specified for the care of such child or children until the further order of the court.

SEC. 10. *Amount of allowance.*—The allowance made to such mother shall not exceed fifteen dollars per month when such mother has but one child under the age of fourteen years, and if she has more than one child under such age, the relief granted shall not exceed ten dollars per month for each of the other children: *Provided*, That in no event shall the relief granted for any one mother and children exceed the sum of fifty dollars per month.

SEC. 11. *Conditions upon which relief is granted.*—Such relief shall be granted by the court only upon the following conditions:

(1) The child or children for whose benefit the relief is granted must be living with the mother of such child or children; (2) the court must find that it is for the welfare of such child or children to remain at home with the mother; (3) the relief shall be granted only when in the absence of such relief the mother would be required to work regularly away from her home and children and when by means of such relief she will be able to remain at home with her children, except that she may be absent for work a definite number of days each week to be specified in the court's order, when such work can be done by her without the sacrifice of health or the neglect of home and children; (4) such mother must, in the judgment of the court, be a proper person, physically, mentally and morally fit to bring up her children; (5) the relief granted shall, in the judgment of the court, be necessary to save the child or children from neglect; (6) a mother shall not receive such relief who is the owner of real property or personal property other than the household goods; (7) a mother shall not receive such relief who is not a citizen of this country and who has not resided in the county where the application is made at least three years next before making such application; (8) a mother shall not receive such relief if her child or children have relatives of sufficient ability to support them.

SEC. 12. *Relief for child between 14 and 16 years.*—Whenever any child shall arrive at the age of fourteen years any relief granted to the mother for such child shall cease: *Provided*, If a child of fourteen years of age be ill or is incapacitated for work, the mother shall receive funds for his care during such illness or incapacity for work until such child is sixteen years of age. The court may, in its discretion, at any time before such child reaches the age of fourteen years, modify or vacate the order granting relief to any mother and for any child.

SEC. 13. *Presence of husband.*—Whenever relief is granted or is about to be granted to a mother whose husband is permanently incapacitated for work by reason of physical or mental infirmity and the presence of such husband in the family is a menace to the physical and moral welfare of the mother or children, then the court may require that such husband be removed from the home and provision for his care made elsewhere, or failing to remove such husband or upon his refusal to be separated from his family, the court may, in its discretion, vacate the order granting relief, or refuse the relief asked for.

SEC. 14. Probation officers—Their pay.—The court having jurisdiction in proceedings coming within the provisions of this act shall have the power to appoint one or more qualified persons of good character, who shall serve and be known as probation officers, during the pleasure of the court, and who shall be paid a suitable compensation by the county for their services, the amount thereof to be determined by the county board.

SEC. 15. Duty of probation officers.—It shall be the duty of such officers to investigate all applications for relief and make a written report of such investigation with their recommendations.

After granting of relief to any mother for the support of her children it shall be the further duty of such officers to visit and supervise, under the direction of the court, the families to which such relief has been granted and to advise with the court and to perform such other duties as the court may direct in order to maintain the integrity of the family and the welfare of the children.

SEC. 16. Levy of tax—Limitation.—The county board in each county shall levy a tax of not to exceed three-tenths of one mill on the dollar annually on all taxable property in the county, such tax to be levied and collected in like manner with the general taxes of the county, and to be known as a mothers' pension fund: *Provided*, That said tax shall not be included in the aggregate of all the taxes required to be reduced under the provisions of an act entitled "An act concerning the levy and extension of taxes," approved May 9 1901, in force July 1, 1901, and acts amendatory thereof.

SEC. 17. Partial relief.—Should the fund herein authorized be sufficient to permit an allowance to only a part of the mothers coming within the provisions of this act, the court shall select, in its discretion, those in most urgent need of such allowance.

SEC. 18. Penalty for fraud.—Any person or persons fraudulently attempting to obtain or fraudulently obtaining any allowance for relief under this act shall be deemed guilty of a misdemeanor and on conviction thereof shall be punished by a fine of not less than five dollars nor more than two hundred dollars, or imprisoned in the county jail for a period of not to exceed six months, or both.

SEC. 19. Repeal.—All acts or parts of acts inconsistent herewith are hereby repealed.

Approved June 30, 1913.

OPERATION OF LAW IN COOK COUNTY.

The above act supersedes the "funds to parents act" of June 5, 1911, which provided that:

"If the parent or parents of such dependent or neglected child are poor and unable to properly care for the said child, but are otherwise proper guardians and it is for the welfare of such child to remain at home, the court may enter an order finding such facts and fixing the amount of money necessary to enable the parent or parents to properly care for such child, and thereupon it shall be the duty of the county board, through its county agent or otherwise, to pay to such parent or parents, at such times as said order may designate, the amount so specified for the care of such dependent or neglected child until the further order of the court." (Laws 1911, pp. 126-127.)

The difficulties that attended the inauguration of this law in Cook County (the only county to take advantage of the act) are described in detail by Mr. C. C. Carstens in his report for the Russell Sage Foundation ("Public pensions to widows with children; a study of their administration in several American cities." New York, 1913.) Because of the magnitude of the task involved in administering the new aid in the peculiarly difficult situation that then existed in connection with the juvenile court at Chicago, Judge Merritt C. Pinckney called to his aid the leading charitable organizations, who detailed five experienced workers (given commissions by the court as voluntary probation officers) to act with the chief probation officer of the court and his deputy as a case committee to sift the facts in the pension cases and make recommenda-

tions to the juvenile court judge. The rules formulated by the juvenile court with the advice of the "conference group" during the first year and a half of the operation of the law were incorporated into the new act passed in 1913.

From July 1, 1911, when the law became effective, to December 31, 1913, 8,061 applications were received by the juvenile court of Cook County at Chicago. Of these, 2,281 applications were dismissed and 780 families (2,654 children) granted funds. Out of this number, funds have been stayed for 434 families (1,546 children). In December, 1913, 346 families (1,108 children) were on the pay roll at a cost for the month of \$8,794.98. From July 1, 1911, to December 31, 1913, a total of \$220,077 was paid out in aid.

Families of—	Average per family.	Average per child.
2 children, 58.....	\$17.17	\$8.88
3 children, 99.....	22.63	7.54
4 children, 95.....	27.80	6.95
5 children, 44.....	28.93	5.88
6 children, 32.....	30.16	5.03
7 children, 11.....	30.41	4.34
8 children, 4.....	40.00	5.00
9 children, 1.....	42.00	4.66
10 children, 2.....	32.50	3.25

In 108 of the families receiving funds in December, 1913, both parents were American born; in 153 both parents were foreign born; in 47 the father was foreign born; in 38 the mother was foreign born. Only 2 of the 1,108 children were foreign born.

(Report of Mrs. E. Quinlan, head of funds to parents division, Feb. 16, 1914.)

FORMS USED IN JUVENILE COURT OF COOK COUNTY (CHICAGO).

APPLICATION CARD.

FORMS USED IN JUVENILE COURT OF COOK COUNTY (CHICAGO)—Continued.

APPLICATION CARD—continued.

Union.	Lodge.	Benefit society.	Other sources of income.	Amt.	Pawns.	Installments.	Debts to.	Amt.	For.
Weekly benefit.									
Race.	Length of time in—			Marriage.			Previous marriage.	Property.	
	County.	State.	U. S.	Date.	Place.	By whom.			
Man.....	.....	.....	.....	.....	.....	.....	Do you own any? What, if any, did your husband leave?
Woman.....	.....	.....	.....	.....	.....	.....
Relatives.	Address.	Kinship.	To.	References.	Address.	Connection.	Of.		
				Church or Sunday school.		Original religion.			
				Man.....		.....		
				Woman.....		.....		
				Children.....		.....		

State of Illinois, County of Cook, ss:

_____ being first duly sworn, on oath doth depose and say that the written statements under the various printed headings on the opposite side of this application card were voluntarily made by this affiant and written thereon by direction of this affiant and that the statements thereon, both written and printed, are true in substance and in fact.

Subscribed and sworn to before me this — day of — A. D. 19—.

_____, *Notary Public.*

REPORT OF INVESTIGATOR.

[illegible]

FORMS USED IN JUVENILE COURT OF COOK COUNTY (CHICAGO)—Continued.

REPORT OF INVESTIGATOR—continued.

Agencies and persons interested.	Address.	Capacity.	Date.	Disabilities.	Of No.	Date.
.....	Accident.....	.....	.....
.....	Chronic physical disability.....	.....	.....
.....	Epilepsy.....	.....	.....
.....	Insanity.....	.....	.....
.....	Subnormal mind.....	.....	.....
.....	Industrial accident.....	.....	.....
.....	Occupational disease.....	.....	.....
.....	Tuberculosis.....	.....	.....
Institutional care of.		Of No.	Date.			
.....	Venereal disease.....	.....	.....
.....	Maternity.....	.....	.....
.....	Imprisonment.....	.....	.....
.....	Death.....	.....	.....

DATE OF GRANT.

Date of grant

Docket No.	Income from fund.	Income from family.	Income from relatives.	Income from all other sources.

Order of the court, ———.

DEPENDENT PETITION.

State of Illinois, county of Cook, ss. In the circuit (juvenile) court of Cook County.
————, Term 19—.

To the honorable, the judges of the circuit court of Cook County, in chancery sitting:

1. Your petitioner, ———, respectfully represents unto your honors that your petitioner is a reputable and responsible person and a resident of said county. Your petitioner further represents that ——— is a female child under fourteen years of age and of the age of ——— years on the ——— day of ———, A. D. 19—, now within the said county, and is a dependent child in this, that —he has not sufficient means of subsistence.

2. Your petitioner further represents that said child is living with its mother, ———; that her residence is ———; that the father of said child is (a) dead (b) permanently incapacitated for work by reason of physical or mental infirmity.

3. Your petitioner further shows that ———, the mother of said child, is a citizen of the United States of America and a resident of said county for three years next before the date of the application for relief upon which this petition is based; that she is a proper person, physically, mentally, and morally fit to bring up said child and that she does not own any real or personal property other than the household goods; that she is poor and unable without financial aid and assistance to properly care for the said child, but is otherwise a proper guardian of said child, and the relief prayed for herein is necessary to save said child from neglect.

4. Your petitioner further represents that said child has no relatives of sufficient ability to support it.

5. Your petitioner further represents that it is for the welfare of said child and for the best interests of the people of the State of Illinois that said child should remain at home with its mother.

6. Your petitioner prays that the said ——— and the board of commissioners of Cook County, Illinois, and each of them who are hereby made parties defendant hereto, be required to personally be and appear before this honorable court on the ——— day of ———, 19—, at the hour of ——— m., and then and there have said child in open court and answer this petition forthwith, and show, if they or either of them can, why the said child should not be and remain a ward of this honorable court, and that upon the hearing of this cause this honorable court will order and direct the board of commissioners of Cook County, Illinois, through the county agent, or otherwise, to provide and furnish to the mother of said child such necessary financial aid and assistance as will enable her to properly care for the said child at home, and that this

honorable court will make such other orders in regard to the visitation and supervision of said child as may be necessary to maintain the integrity of the family home and the welfare of the said child, and make such other and further orders in this cause as to your honors shall seem meet and according to equity and good conscience and according to the statute in such case made and provided.

May it please your honors to grant unto your petitioner the writ of summons out of chancery, directed to the sheriff or any probation officer of said county therein, and thereby commanding him to summon the said defendant, _____, and the board of commissioners of Cook County, Illinois, to personally be and appear before this honorable court on the _____ day of _____, A. D. 19____, at the hour of _____, and that they then and there have said _____ in open court.

_____, Attorney for Petitioner.

State of Illinois, county of Cook, ss.

_____, being first duly sworn, deposes and says that affiant has read the above and foregoing petition by affiant subscribed and knows the contents thereof, and that the same is true to the best of affiant's knowledge, information, and belief.

Subscribed and sworn to before me this _____ day of _____, A. D. 19____. _____, Clerk.

SUMMONS.

State of Illinois, Cook County, ss. In the circuit court of Cook County (juvenile court).

The people of the State of Illinois, to the sheriff or any probation officer of Cook County, greeting:

We command that you summon _____ and all whom it may concern, if he shall be found in your county, personally to be and appear before the circuit court of Cook County before the honorable _____, one of the judges thereof, designated to hold and holding juvenile court thereof, in the juvenile court room at the courthouse, in room 1007, in Chicago, in said county of Cook, on the _____ day of _____, A. D. 191____, at _____ o'clock _____ m. to answer unto the petition of _____ heretofore filed in the office of the clerk of said court, alleging that _____, now in the custody and control of the said _____, is a dependent child and that he then and there have the said child in open court.

And have you then and there this writ, with an endorsement thereon in what manner you shall have executed the same.

Witness, _____, clerk of the said court, and the seal thereof, this _____ day of _____, 191____.

_____, Clerk.

Served this writ on the within named _____ by reading the same to _____ and at the same time delivering a copy thereof to _____ this _____ day of _____, 191____.

Served this writ on the within named _____ by leaving a copy thereof at _____ usual place of abode, with _____, a member of _____ family of the age of ten years and upwards, at the same time informing _____ of the contents thereof.

The other within-named defendants not found in my county.

APPEARANCE OF PRESIDENT OF COUNTY BOARD.

State of Illinois, county of Cook, ss. In the circuit court of Cook County.

In the matter of _____ (alleged dependent), juvenile No. _____, I, _____, president of the county board, do hereby enter my appearance herein waiving service of notice.

HISTORY SHEET.

Name of child _____. Age _____. Father's name, nationality, and creed _____, _____. Address _____. Mother's name, nationality, and creed _____, _____. Address _____. Mother's earning capacity _____. _____, Probation Officer.

ORDER ON COUNTY BOARD TO GRANT RELIEF.

DECREE, DEPENDENT _____ ON PROBATION.

CHICAGO, _____, 191____.

In the matter of _____, juvenile No. _____.

This cause now coming on to be heard upon the petition for relief filed herein and the appearance of the defendants, the board of commissioners of Cook County, Illinois, and _____, and the child _____, being now here in open court in his own proper person, and the defendants, the board of commissioners of Cook County, Illinois, and _____ being also here in open court, and the court having heard all the evidence adduced and being fully advised in the premises, finds:

That it has jurisdiction of all the parties to this cause and the subject matter hereof; that the petitioner is a reputable person and a resident in the County of Cook and State of Illinois, and that _____ is a female person under the age of fourteen years and of the age of _____ years on the _____ day of _____, A. D. 19____, now within said county and living with its mother, and is a dependent child in this that it has not sufficient means of subsistence as alleged in the petition herein.

The court further finds that the father of said child is (a) dead; (b) permanently incapacitated for work by reason of physical or mental infirmity; that _____, mother of said child, is a citizen of the United States of America and is and has been a resident of said county for three years next before the date of the application for relief herein and that she is a proper person physically, mentally, and morally fit to bring up said child; that she does not own any real or personal property other than the household goods; that she is poor and unable without financial aid and assistance to properly care for said child, but is otherwise a proper guardian of said child, and that the relief prayed for herein necessary to save said child from neglect.

The court further finds that all the material allegations in the petition herein are true and proven as therein alleged.

The court further finds that it is for the welfare of said child and for the best interest of the people of the State of Illinois that said child should remain at home with its mother.

And the court further finds upon testimony heard in open court that the sum of _____ dollars per month is the amount of money necessary to enable the mother to properly care for said child at home.

It is, therefore, ordered that the said _____ be and remain a ward of this court and that said ward go hence and be and remain with _____, mother of said child, subject to the friendly visitation and supervision of the chief probation officer of this court or such assistant probation officer of this court as may from time to time be designated by him.

It is further ordered, adjudged, and decreed that the sum of _____ dollars per month be, and hereby is, fixed by the court as the amount of money necessary to enable the mother to properly care for said child at home, and that the board of commissioners of Cook County, Illinois, through its county agent, or otherwise, be, and hereby is, directed and ordered to pay to _____, mother of said child, the sum of _____ dollars per month, beginning _____, until further order of court.

And the court hereby retains jurisdiction of this cause for the purpose of making such further or other orders herein for the welfare of said child as may from time to time be found to be in accordance with equity and in accordance with the statute in such case made and provided.

Enter _____,

Judge of the Circuit (Juvenile) Court of Cook County, Illinois.

IDENTIFICATION CARD.

[Made out in triplicate in 3 colors; red one given to woman, yellow to county agent, white filed in funds department.]

Present this card at office of Cook County agent, 213 So. Peoria Street, on the 5th day of _____ each month.

IDENTIFICATION.

In the matter of _____, juvenile No. _____.

(Reverse side.)

(Signature of parent.)

CHICAGO, _____.

County Agent of Cook County, Illinois.

DEAR SIR: I hereby certify that the foregoing is the signature of Mrs. _____, who by order of the juvenile court entered on the _____ day of _____, A. D. 19____, is entitled to relief under the "funds to parents act" for h— above-named children.

Chief Probation Officer of the Juvenile Court.

IDENTIFICATION CARD.

[Used for purpose of registration with other departments of the court.]

Surname _____ Date of first report _____.

First names.		Address.	Dept.	Officer.
1. F	6.			
2. M	7.			
3.	8.			
4.	9.			
5.	10.			

OTHER REPORTS.

Dates.	Name of child complained of.	Address.	Dept.	Officer.

It is therefore ordered that the order of payment (under the funds to parents act) heretofore on the ____ day of ____, 19____, entered herein, be, and the same is hereby, amended so that from and after the ____ day of ____, 19____, the same shall read as follows, to wit:

It is therefore ordered, adjudged, and decreed that the sum of ____ dollars per month be, and hereby is, fixed by the court as the amount of money necessary to enable the parent to properly care for said child at home and that the board of commissioners of Cook County, Illinois, through its county agent or otherwise, is hereby directed and ordered to pay to ____, parent, the sum of ____ dollars per month, beginning ____, until further order of court.

Enter ____, ____, Judge.

NOTICE OF MOTION TO STAY PAYMENT.

State of Illinois, county of Cook. In the circuit (juvenile) court of Cook County, Illinois.

In the matter of ____, Juvenile No. ____.

To ____ and ____, defendants in the above entitled cause:

Please take notice that on ____ the ____ day of ____, A. D. 19____, at the hour of ____ m., or as soon thereafter as I can be heard before his honor, Judge ____, at his court room at the courthouse in room 1007, in Chicago, in said county, I shall move the court to stay further payment under the "funds to parents act" under the order heretofore on the ____ day of ____, A. D. 19____, entered herein at which time and place you may appear if you see fit.

Served the within notice on the named ____, ____, defendants, by reading the same to ____, at the same time delivering a copy thereof to ____, this ____ day of ____, 19____.

[The above notice is also used for the increasing or decreasing of funds after first grant and for continuing funds after child is 14 years old, if incapacitated.]

ORDER STAYING PAYMENT.

State of Illinois, county of Cook, ss. In the circuit (juvenile) court of Cook County.

In the matter of ____, Juvenile No. ____.

This day comes ____ and enters herein his motion to stay further payment under the funds to parents act under the order heretofore on the ____ day of ____, 19____, entered herein.

And thereupon this cause coming on to be heard on said motion and it appearing to the court that due service of said motion has been had on the defendants ____, ____, and said defendants ____, ____, being now here in open court ____.

The court after hearing all the evidence adduced and being fully advised in the premises hereby sustains said motion.

It is therefore ordered that further payment under the "funds to parents act" by order of court heretofore on the ____ day of ____ entered herein be, and the same is hereby stayed until further order of court and this cause hereby stands continued.

Enter ____, ____, Judge.

IOWA.

[Supplement to Code 1907, as amended by Laws 1909, chap. 13; Laws 1913, chap. 31.]

SECTION 254-a13. *Jurisdiction.*—The district court and superior courts are hereby clothed with original and full jurisdiction to hear and determine all cases coming within the purview of this act, and the proceedings, orders, findings and decisions of said courts shall be entered in a book or books to be kept for the purpose and known as the juvenile court record. Said courts shall always be open for the transaction of business coming under the purview of this act, but the hearing of any matter requiring notice shall be had only in term time or at such time and place as the judge may appoint.

SEC. 254-a15. *Petition.*—Any reputable person being a resident of the county, having knowledge of a child in his county who appears to be either dependent, neglected or delinquent, may, without fee, file with the clerk of the court having jurisdiction of the matter, a petition in writing, setting forth the facts, verified by affidavit; it shall be sufficient if the affidavit is upon information and belief.

SEC. 254-a16. *Summons.*—Upon the filing of the petition the court may cause a summons to issue requiring the person having custody or control of the child or with whom the child may be, to appear with the child at a time and place stated in the summons. The parents of the child, if living, and their residence

is known, or its legal guardian, if one there be, or if there is neither parent nor guardian or if his or her residence is not known, then some relative, if there be one and his residence is known, shall be notified of the proceedings, and in any case the judge may appoint some suitable person to act in behalf of the child. * * * On the return of the summons or other process, or as soon thereafter as may be, the court shall proceed to hear and dispose of the case in a summary manner. * * *

SEC. 254-a18. *Probation officers.*—The court shall have authority to appoint or designate one or more discreet persons of good character to serve as probation officers * * *. In case a probation officer shall be appointed by any court, it shall be the duty of the clerk of the court, if practicable, to notify the said probation officer in advance when any child is to be brought before the said court; it shall be the duty of said probation officer to make such investigation as may be required by the court; to be present in court in order to represent the interests of the child when the case is heard; to furnish to the court such information and assistance as the judge may require * * *.

SEC. 254-a20. *Dependent children—Custody—Aid to poor mothers.*—When any child of the age stated in section two (2), hereof, shall be found to be dependent or neglected, within the meaning of this act, the court may make an order committing the child to the care of some suitable State institution, or to the care of some reputable citizen of good moral character, or to the care of some industrial school, as provided by law, or to the care of some association willing to receive it, embracing in its objects the purpose of caring for and obtaining homes for dependent and neglected children, which association shall have been accredited as hereinafter provided.

If the court finds that the mother of such dependent or neglected child is a widow, and if the court further finds that such mother is poor and unable to properly care for said child, but is otherwise a proper guardian, and that it is for the welfare of such child to remain at home, the court may enter an order finding such fact and fixing an amount of money necessary to enable such mother to properly care for such child, and thereupon it shall be the duty of the county board of supervisors, through its overseer of the poor or otherwise, to pay to such mother, at such times as said order may designate, the amount so specified for the care of such dependent or neglected child until further order of the court: *Providing, however,* That the amount to be paid for the care of any such child shall not exceed the sum of two dollars per week: *And provided further,* That such payment shall cease upon any such child attaining the age of fourteen years. Any mother whose husband is an inmate of any institution under the care of the board of control, shall, for the purposes of this act, be considered a widow, but only while such husband is so confined. [Amendment approved April 19, 1913. Laws 1913, chap. 31.]

The court may, when the health or condition of the child may require it, cause the child to be placed in a public hospital or institution for treatment or special care, or in a private hospital or institution which will receive it for like purposes without charge.

MASSACHUSETTS.

[Laws 1913, chap. 763.]

An Act To provide for suitably aiding mothers with dependent children.

Be it enacted, etc., as follows: SECTION 1. *Aid to mothers with dependent children.*—In every city and town the overseers of the poor shall, subject to the provisions of the subsequent sections of this act, aid all mothers with depend-

RECEIVED BY THE CLERK OF THE HOUSE

SEC. 4. To whom act shall apply.—This act shall apply to all mothers and their dependant children, whether or not they or any of them may have a settlement within the Commonwealth, who shall have resided in the Commonwealth not less than three years. No person shall acquire a settlement or be in process of acquiring a settlement while receiving aid hereunder.

SEC. 5. State board of charity to have supervision.—The State board of charity shall hereafter supervise the work done and measures taken by the overseers of the poor of the several cities and towns in respect to families in which there is one child or more under the age of fourteen, whether or not such family or any member thereof has a settlement within the Commonwealth; and for this purpose may establish such rules relative to notice as they deem necessary and may visit and inspect any or all families aided under this act, and shall have access to any records and other data kept by the overseers of the poor or their representatives relating to such aid; and said board shall, in its annual report to the legislature, report upon the work done by its own agents and by the overseers of the poor in respect to such families any of whose members are

without legal settlement in the Commonwealth; and shall make a separate report on the work done by the overseers of the poor in respect to such families in which all the members have a legal settlement in the Commonwealth.

SEC. 6. *Reimbursement by the Commonwealth.*—In respect to all mothers in receipt of aid hereunder the city or town rendering the aid shall be reimbursed by the Commonwealth, after approval of the bills by the State board of charity, for one-third of the amount of the aid given. If the mother so aided has no settlement, the city or town shall be reimbursed for the total amount of the aid given, after approval of the bills by the State board of charity as aforesaid. If the mother so aided has a lawful settlement in another city or town two-thirds of the amount of such aid given may be recovered in an action of contract against the city or town liable therefor in accordance with the provisions of chapter eighty-one of the Revised Laws and acts in amendment thereof and in addition thereto.

SEC. 7. *Appropriation.*—For the purpose of reimbursing the cities and towns, as provided in the foregoing section, there shall be appropriated from the treasury of the Commonwealth the sum of fifty thousand dollars for the operations of the first year.

SEC. 8. *Repeal.*—All acts and parts of acts inconsistent herewith are hereby repealed.

SEC. 9. *Time of taking effect.*—This act shall take effect on the first day of September, nineteen hundred and thirteen.

Approved June 12, 1913.

OPERATION OF LAW.

Prior to the passage of this act a commission to study the question of the support of dependent minor children of widowed mothers had been created by Resolves 82, Laws of 1912, and had made its report to the legislature. (Printed as H. Doc. 2075, 1913.) Included in the report (p. 37) is a draft of the bill recommended by the commission which differs from that enacted by the general court in that it provided for a State commission of five persons with authority to order payments, to be called subsidies, to be made by the overseers of the poor to indigent widowed mothers with dependent children. The law enacted gives the power of initiating aid to the overseers of the poor alone, as an extension of the system of local relief, with no limitations on the amount to be granted. The State board of charity has, however, general supervision of the work, and upon its approval of the bills thereby incurred the Commonwealth reimburses one-third on settled cases and the total amount on unsettled. The board is carrying out the mother's aid law through a woman supervisor and five woman visitors under the superintendent of the adult poor division of the board. The immediate guidance of the whole work is under one of the board's committees known as the social service committee. An account of the administration of the law, by Mrs. Ada E. Sheffield, the chairman of this committee, is given in the Survey for February 21, 1914. She summarizes the method of granting aid as follows:

"The mother makes application of the overseer of the poor in her place of residence. He investigates her need, fitness, and resources, filling out a blank form which the board has prepared for the purpose, and ending with his recommendation. This information and advice he sends in to the State board. The supervisor then assigns one of the five women visitors to make a second independent investigation, and reviews the recommendation of the overseer in the light of the two findings. The result of her study of the case, whether approval, disapproval, or suggestions on treatment, she embodies in a letter to the overseer in question. In the course of her work she is in constant conference with the superintendent of the adult poor division, a man who has the advantage of many years' acquaintance with the individual overseers. The chairman of the committee goes over cases that present some deviation from the usual types, while the committee itself considers special cases and all general questions of policy."

34 MOTHERS' PENSIONS IN UNITED STATES—MASSACHUSETTS.

After three months' experience with the types of families recommended for aid by the overseers and after conferences with these officials the State board of charity drew up a following tentative statement of the general policies which should govern the granting of the new form of aid:

TENTATIVE STATEMENT OF GENERAL POLICIES GOVERNING NEW FORM OF AID.

COMMONWEALTH OF MASSACHUSETTS,
STATE BOARD OF CHARITY,
DIVISION OF STATE ADULT POOR,
State House, Boston, November 30, 1913.

Overseers of the poor.

DEAR SIRS: Under the provisions of chapter 763, Acts of 1913, the State board of charity was given certain supervisory powers, and also control of rules relative to notices to and reimbursement by the Commonwealth. This law can not be successfully administered unless the overseers of the poor and this board work harmoniously. The board believes that relief should be administered according to general policies. Since the people who may benefit by this act will inevitably adapt their lives to the conditions under which they can receive help, they should know what these conditions are. The policies according to which public authorities administer the ample relief provided for in this law will have an educational influence, not only on the beneficiaries, but on all those families that are on the border line of need. This influence will be wholesome in proportion to the wisdom shown by the overseers and the State board of charity. While the board is becoming acquainted with the types of family problems which the overseers are considering under this act, it would be a serious mistake for us to suggest policies which might probably have to be reversed later. In some directions, however, the board can state its position at once.

From our observation of the families aided under the provisions of this act and our general knowledge of relief work, we believe it wise and necessary at this time to establish the following definite policies, and ask your cooperation in their application:

1. Aid granted should be of the kind best adapted to the needs of the individual family. In many cases a partial allowance of cash is desirable; but we would suggest that only in cases where the mother is intelligent and judicious should the full allowance be in cash. Cash allowances should be granted weekly, never monthly.

2. If there is illness in a family receiving relief under the provisions of chapter 763, Acts of 1913, which is temporary, requiring only medicine or a few doctor's visits, the medical relief or medicine should be granted under the provisions of the said act; but in cases of long-continued illness or illness requiring hospital treatment, notice should be sent under the provisions of section 14, chapter 85, Revised Laws. Reimbursement by the Commonwealth for medical attendance in the home will be made in accordance with the provisions of chapter 292, Acts of 1909.

3. Section 4 provides in part: "This act shall apply to all mothers and their dependent children, whether or not they or any of them may have a settlement within the Commonwealth, who shall have resided in the Commonwealth not less than three years." Families who have not resided in the Commonwealth for three years subsequent to September 1, 1910, should not be considered as coming within the provisions of the act. If such a rule were not established, many families who were residents of Massachusetts years ago would return from other States for the express purpose of becoming beneficiaries under the act.

4. The law contemplates aid for families under a constructive plan for a definite period, or until such time as the dependent children have attained the age of 14 years. Although the law provides *relief* and not *pensions*, the idea that animated its passage was that of granting to dependent mothers an income on which they may count while their children are below working age. The need which was urged before the legislature, the illustrative cases brought forward to emphasize that need, were both such as would continue through a period of years. Such a "regular allowance differs from most material relief in other particulars than in the size, or even the regularity, of the relief. It represents a settled plan requiring a specified sum per week, the mother being informed of the plan, relieved from worry, and thus put in a position to adjust

her expenses to her income." It seems wise for the present to consider only such cases as will, according to your best judgment, require relief for at least a period of one year. Other cases can be handled by private charities, by churches, or under the temporary aid law.

5. It is important that the law should not serve as a palliative for desertion. It therefore seems unwise to consider an application under this act until after one year has elapsed since the desertion occurred, and the mother has shown her desire to ameliorate conditions by requesting the court to issue a warrant for nonsupport under the provisions of chapter 456 of the Acts of 1911 and amendments thereto. We should use our influence to strengthen the sense of responsibility for children by making the lot of the deserting father less, and not more, eligible.

6. The mother should not discontinue her employment unless it is apparent her health is being impaired, or the children require more personal supervision. In many instances it may be desirable to arrange for a different kind of employment, or discontinuance of service for a portion of the week. There are undoubtedly relatives or other reliable persons living with many of these families who can give the dependent children proper attention during the mother's absence. To insist that the mother shall not work, regardless of home conditions, would tend to discourage that desire for thrift and independence which is an essential element in society. The policy should be stimulative, and constructive rather than destructive.

7. The board suggests that before granting aid to any mother with illegitimate children, the overseers consult with the superintendent of the division of State adult poor. The presumption is against aiding such mothers under this law, since to do so would offend the moral feeling of respectable mothers, and would thus do violence to a traditional sentiment that is inseparable from a respect for virtue.

8. If the applicant has funds to an appreciable amount, the State board of charity would appreciate a reference of the case for consideration prior to the granting of aid. The board believes that unless a definite protective plan can be formulated by the overseer whereby a certain amount can be dispensed by a trustee, or otherwise, according to the need of each individual case, the case should not be considered as coming within the provisions of the act.

9. If the applicant has an equity to an appreciable amount in the real estate upon which the family resides, the State board would appreciate a reference of the case for consideration before aid is granted.

10. To carry out the intent of this law, which applies only to those families providing a proper environment for the dependent children, the board decides that the presence of male lodgers presents dangers incompatible with the best interests of the family; and declines, as a rule, to reimburse in such cases. The board prefers, if necessary, to reimburse, in accordance with the law, for additional relief granted to meet the reduction of income caused by such removal.

Obviously, no one can draw an arbitrary line between a fit and an unfit mother. The extremes of fitness or unfitness all will agree upon; it is the doubtful cases about which questions would arise. Since this aid which the public gives is adequate, the board feels that we can ask a fairly high standard of character and home care from the mothers. With such a reward in view, it is a poor sort of woman who will not do well. The public authorities can make adequate relief a powerful lever to lift and keep mothers to a high standard of home care. If we grant the aid to any woman whose care of her children will just pass muster, we throw away a chance to make these women improve. If, on the contrary, we make relief under this law conditional on a fairly high standard of home care, we shall find that the mothers will rise to this standard. The fact is that a mother of little children who will not attend conscientiously to their diet, cleanliness, health, and conduct for the sake of an adequate income, steadier possibly than were her husband's wages, is not the sort of woman Massachusetts wants to help under this act.

In fine, possible and actual beneficiaries will adapt themselves to the conditions which attend the receipt of this relief. We can hardly exaggerate the beneficent influence which a relief policy, administered always with broad educational aims in mind, may exercise on the people of the State.

The board believes that effective help for the needy is conditional upon close and cordial cooperation between public and private charities. "Cooperation" between charities includes either or both of two sorts of relation: The agencies may divide among them the needy families, agreeing not to trespass on each

other's cases, or they may consult and work together on the same cases. A division of the field of work is a business arrangement often necessary to economy of effort. On the other hand, public and private charities need to consult with each other on the treatment of individual cases in order that each may profit by the other's point of view. The private charity that holds aloof becomes narrow, provincial; the public charity that tries to be sufficient unto itself ends by giving perfunctory care to its charges. Because of the privilege which private charities have of limiting the amount of their work, they can often exercise closer supervision over their cases than is possible to public visitors. Either associated charities, children's societies, district nursing associations, or churches may further the work of the overseers by visiting and by keeping the overseers informed of home conditions in the intervals of official visits.

If from your experience the above policies do not work out successfully, we would appreciate your suggestions or criticisms, either by discussion at the future meetings the board will hold with the local boards, by correspondence, or by personal interview with the superintendent of State adult poor.

We have also adopted the following rules relative to notices and submission of bills:

1. Whenever an original notice has been sent to the State board on Form 1471 or 1472 it will continue in force until the case is closed.

2. Reimbursement by the Commonwealth will be allowed for the five days prior to date of notice instead of 24 hours as previously stated.

3. Section 3 of said act provides: "The said overseers, either by one of their own number or by their duly appointed agent, shall visit at least once in every three months at their homes or other place or places where they may be living, each mother and her dependent children who are being aided financially or otherwise by said overseers, and after each visit shall make and keep on file as a part of their official records a detailed statement of the condition of the home and family and all other data which may assist in determining the wisdom of the measures taken and the advisability of their continuance; and said overseers shall at least once in each year reconsider the case of each mother with dependent children with whom they are dealing, and enter their determination with the reason therefor on their official records."

In order that the supervisory board may be constantly advised of conditions in the home and the continuance or discontinuance of aid, we have prepared a blank, substantially a renewal notice, which should be sent to the State board of charity after each quarterly visit of the overseers or their duly appointed agent, as provided in the above-quoted section. A statement has also been added to this blank providing for notification of the yearly reconsideration by the board of overseers.

Bills should be rendered to the Commonwealth for aid granted during the quarter ending November 30, 1913, the five months ending April 30, 1914, and every six months thereafter.

Bills should be rendered to city or town of legal settlement for two-thirds of the amount of such aid given in accordance with the provisions of section 6 of the said act. Sample forms of notices and bills are inclosed, and may be obtained from the usual source.

Very truly, yours,

_____, *Superintendent.*

MICHIGAN.

[Laws 1913, No. 228.]

An Act To amend section seven of act number six of the Public Acts of the extra session of nineteen hundred seven, entitled "An act to define and to regulate the treatment and control of dependent, neglected and delinquent children; to prescribe the jurisdiction of the probate courts and the powers, duties and compensation of the probate judges with regard thereto; to provide for the appointment of county agents and probation officers and to prescribe their powers, duties and compensation," approved October twenty-four, nineteen hundred seven; to provide for the relief of poor mothers of dependent and neglected children.

The people of the State of Michigan enact: SECTION 1. Section seven of act number six of the Public Acts of the extra session of nineteen hundred seven,

entitled "An act to define and to regulate the treatment and control of dependent, neglected and delinquent children; to prescribe the jurisdiction of the probate courts and the powers, duties and compensation of the probate judges with regard thereto; to provide for the appointment of county agents and probation officers and to prescribe their powers, duties and compensation," approved October twenty-four, nineteen hundred seven, is hereby amended to read as follows:

SEC. 7. *Dependent children—Assistance to needy mothers.*—When any child under the age of seventeen years shall be found to be a dependent or neglected child within the meaning of this act, the court may make an order committing the child to the care of some suitable State institution subject to the law and regulations governing such institution, or to the care of some reputable citizen of good moral character, or to the care of some training school, or industrial school, as such provided by law, to the care of some association willing to receive it, embracing in its objects the purpose of caring for or obtaining homes for dependent or neglected children, which association shall have been approved by the State board of corrections and charities: *Provided*, That if the mother of such dependent or neglected child is unmarried, or is a widow or has been deserted by her husband, or if married has been divorced, and is poor and unable to properly care and provide for said child, but is otherwise a proper guardian, and it is for the welfare of such child to remain in the custody of its mother, the court may enter an order finding such facts and fixing the amount of money necessary to enable the mother to properly care for such child; such amount not to exceed three dollars a week for each child. Thereupon it shall be the duty of the county treasurer of the county of which such child is a resident, to pay from the general fund of such county, to such mother, at such times as such order may designate, the amount so specified for the care of such dependent or neglected child until the further order of the court. Such order shall not require the approval of the board of supervisors or county auditor or auditors. The court shall, when the health or condition of the child shall require, cause the child to be placed in a public hospital or in an institution for treatment or special care, or in a private hospital or institution for special care or treatment, the expense to be paid from the general fund of the county of which the child is a resident.

Approved May 7, 1913.

The provisions of act No. 6 of the Public Acts of the extra session of 1907 which relate to the courts having jurisdiction and the method by which cases of dependent children are brought into court are as follows:

[Howell's Statutes, 1913; 11645, 11647, 11648.]

11645. SEC. 2. *Jurisdiction.*—The probate court shall have original jurisdiction in all cases coming within the terms of this act, and while proceeding under this act shall be termed juvenile division of the probate court. * * * *Provided*, That in case the judge of probate in any county is so occupied with the duty devolving upon him in the probate court as not to have time to attend to the cases arising under this act and shall so certify to the circuit court, the circuit judge or one of them in districts where there is more than one circuit judge, to be designated by the judges of said court, shall hear the cases under this act provided to be heard by the judge of probate, but said circuit judge shall not exercise the powers of the probate court in such cases for a longer period than two months, unless a new certificate and designation be made, which shall, in like manner, be effective for a like period. * * *

11647. **Sec. 4. County agents.**—The governor shall appoint in each county of this State, upon the recommendations of the State board of corrections and charities, an agent of such board for the care and protection of dependent, neglected and delinquent children, who shall hold his office during the pleasure of the governor, and shall be known as the county agent for the county for which he is appointed. * * *

11648. **Sec. 5. Petition—Summons—Hearings.**—Upon the filing with the court of a sworn petition setting forth upon knowledge or upon information and belief, the facts showing that any child resident in said county is a delinquent, dependent or neglected child within the meaning of section one of this act, the court shall before any further proceeding is had in the matter give notice thereof to said county agent or to a duly appointed probation officer, who shall have opportunity allowed him to investigate the facts and circumstances surrounding the case, and upon receiving such notice the said officer shall immediately proceed to inquire into and make a full examination of the parentage and surroundings of the child and all the facts and circumstances of the case, and report the same to the said court in writing. If, after a full investigation, it shall appear to the court that public interest and the interest of the child will be best subserved thereby, a summons shall issue reciting the substance of the petition and requiring the person having custody or control of the child, or with whom the child may be, to appear with the child at a place and time which shall be stated in the summons; and if such person is other than the parent or guardian of such child, then said parent or guardian shall be notified of the pendency of the case. The court shall notify the county agent or probation officer making the preliminary investigation to attend said trial and act as custodian of said child. * * * On return of the summons or writ, or as soon thereafter as may be, the court shall proceed to hear and dispose of the case upon such testimony as may be produced, and if the allegations against the child are proved the court may adjudge said child a delinquent, dependent or neglected child, as the case may be; and if it shall appear to the court that the public interests and the interest of such child will be best subserved thereby, he may make an order for the return of such child to his or her parents or guardian or friends. * * *

An earlier law, passed in 1911, providing for relief out of school funds to children of indigent parents to enable them to attend school is apparently not superseded by the law enacted in 1913, which provides for the payment of relief out of the county funds. (Letter from State superintendent of public instruction, Dec. 24, 1913.) The text of this law is here given, as it differs from the usual form of school-aid law in that it provides for the payment of money for support in addition to books and clothing.

[Laws 1911, No. 198; Howell's Statutes, 1913; 3578-3581.]

An Act To provide means whereby children of indigent parents within school age, may attend school.

The people of the State of Michigan enact: **SECTION 1. Schooling of children of indigent parents.**—Any truant officer of this State when authorized by the board of education to investigate, and when satisfied that any child within his jurisdiction, required by law to attend school, is unable so to do by reason of the fact that the services of such child are absolutely required for the support of himself or herself, or to assist in the support or care of others legally entitled to his or her services, such person or persons being unable to support or care for themselves, such truant officer shall report the case to the board of education of the school district in which such child may reside, and such board of education shall be authorized to and may in their discretion grant such relief

as will enable the child to attend school during the entire school year. In all cases where such relief is necessary the said board of education shall be authorized to, and may in their discretion, furnish to such child the necessary textbooks free of charge, in addition to such other necessary assistance or support.

SEC. 2. *Payment to family.*—For the purposes in this act provided such board of education shall pay, during the school year, to the family of such child a sum not to exceed three dollars a week, nor more than six dollars a week for the children of any one family. Said money shall be paid in the same manner and out of the same fund as are the current expenses for the maintenance of public schools.

SEC. 3. *Duty of truant officer.*—It shall be the duty of the truant officer or treasurer of the school board in any district where a child is receiving aid under the provisions of this act to disburse the funds herein provided for, and to investigate the environment of the child, and to make an itemized report monthly to the school board or some officer appointed by the board, of the manner in which such funds were expended: *Provided*, That in cities having a juvenile court such investigations shall be made by such court.

SEC. 4. *Teacher to report.*—The truant officer shall notify the teacher to whom any child receiving aid under the provisions of this act may be assigned, and it shall be the duty of the teacher having charge of such child to report monthly to the school board through the superintendent of schools, the progress such child is making in his or her school work, and the record of attendance together with such other information as may be deemed necessary. Said truant officer shall receive the same compensation for the time so engaged under the provisions of this act as he receives for similar services performed by him and shall be paid in the same manner.

Approved April 29, 1911.

MINNESOTA.

[Laws 1913, chap. 130.]

An Act Providing for the payment of county aid to mothers of dependent and neglected children under certain circumstances.

Be it enacted by the Legislature of the State of Minnesota: **SECTION 1. *Allowance to needy mothers.***—Whenever any child under the age of fourteen years shall be found to be dependent or neglected within the meaning of chapter 285, General Laws 1905, or chapter 232, General Laws 1909, or chapter 27, Revised Laws 1905, and it shall also appear that the mother of such child is a widow, or that her husband, if living, is an inmate of a penal institution or an insane asylum, or because of physical disability is unable to support his family, and that the dependent or neglected condition of such child is due wholly or in part to the poverty of the mother and the want of adequate means to properly care for such child and that the mother of such child is otherwise a proper person to have the custody of such child and that the welfare and best interests of such child will be subserved by permitting it to remain in the custody of its mother, the court¹ may, in its discretion, make and file an order finding and determining such facts, and therein and thereby fix and determine the amount of money, not exceeding \$10.00 per month, which it deems necessary for the county to contribute towards the support of such child in her own home.

¹That is, the juvenile court in counties over 50,000. In counties under 50,000 the judge of probate has the power to appoint guardians for dependent, neglected, and delinquent children. Cases involving such children may be brought before the court by petition of any resident of the county.

SEC. 2. Allowance paid out of general county funds.—A certified copy of such order shall be filed with the county auditor of the county of which such child's mother is a resident, and thereupon and thereafter, and so long as such order remains in force and unmodified, it shall be the duty of the county auditor each month to draw his warrant on the general revenue fund of his county in favor of the mother for the amount specified in such order. Such warrant shall be delivered to the clerk of the court making the order and shall by the latter be delivered to the mother upon her executing duplicate receipts therefor, one to be retained by the auditor and the other shall be filed by the clerk with the other records in the proceedings relating to such child. It shall be the duty of the county treasurer to pay such warrant out of the funds in the general revenue fund of the county when properly presented. No such county aid shall be paid towards the support of any child who has arrived at the age of fourteen (14) years, nor to any mother who has not resided in said county one year and in the State two years continuously next preceeding the making of such order.

SEC. 3. Court may make order at any time.—The court may at any time revoke or modify any order previously made; a certified copy of any such subsequent order shall forthwith be filed with the county auditor and thereafter warrants shall be drawn and payments made only in accordance with such subsequently executed order.

Approved March 27, 1913.

MISSOURI.

[Laws 1911, p. 120-122, as amended by Laws 1913, p. 146-7.]

An Act To provide for the partial support of poor women, whose husbands are dead or convicts, when such women are mothers of children under the age of fourteen (14) years and reside in counties now or hereafter having not less than two hundred and fifty thousand (250,000) inhabitants and not more than five hundred thousand (500,000) inhabitants, and now or hereafter having or holding a juvenile court, with an emergency clause.

Be it enacted by the General Assembly of the State of Missouri, as follows:
SEC. 1. County courts to make appropriations.—In every county now containing or that may hereafter contain two hundred and fifty thousand (250,000) inhabitants and less than five hundred thousand (500,000) inhabitants and in which a juvenile court is now being held or may hereafter be held, it shall be the duty of the county court to provide out of the moneys in the county treasury, not already appropriated, an amount sufficient to meet the purposes of this law, but not exceeding in any one year the sum of twelve thousand dollars (\$12,000,000) for the partial support of women whose husbands are dead, or whose husbands are prisoners or whose husbands are in either one of the four State hospitals for the insane or in the Missouri colony for the feeble-minded and epileptic, when such women are poor and are the mothers of children under the age of fourteen years, and such mothers and children reside in such counties.

SEC. 2. Amount of allowance.—The allowance to each of such women shall not exceed ten dollars (\$10.00) a month when she has but one child under the age of fourteen (14) years, and if she has more than one child under the age of fourteen years, it shall not exceed the sum of ten dollars (\$10.00) a month

¹ The amendment of 1913 extended the provisions of the law to women whose husbands were in State hospitals for the insane or the Missouri colony for the feeble-minded and epileptic.

for the first child and five dollars (\$5.00) a month for each of the other children under the age of fourteen years.

SEC. 3. *Conditions of allowance.*—Such allowance shall be made by the juvenile court and only upon the following conditions: (1) The child or children, for whose benefit the allowance is made, must be living with the mother of such child or children; (2) the allowance shall be made only when in the absence of such allowance, the mother would be required to work regularly away from her home and children, and when by means of such allowance, she will be able to remain at home with her children; (3) the mother must, in the judgment of the juvenile court, be a proper person, morally, physically and mentally, for the bringing up of her children; (4) such allowance shall in the judgment of the court be necessary to save the child or children from neglect; (5) no person shall receive the benefit of this act who shall not have been a resident of the county in which such application is made for at least two years next before the making of such application for such allowance.

SEC. 4. *When allowance shall cease.*—Whenever any child shall reach the age of fourteen years, any allowance made to the mother of such child for the benefit of such child shall cease. The juvenile court may, in its discretion, at any time before such child reaches the age of fourteen years, discontinue or modify the allowance to any mother and for any child.

SEC. 5. *Partial relief.*—Should the fund herein authorized be sufficient to permit an allowance to only a part of the persons coming within the provisions of this law, the juvenile court shall select those cases in most urgent need of such allowance.

SEC. 6. *To whom applicable.*—The provision of this law shall not apply to any woman whose husband is not dead or who is not confined in the Missouri State Penitentiary or other prison in this State, and in the latter case it shall not apply unless such prisoner is the lawful husband of the woman seeking such allowance.

SEC. 7. *Penalty for fraud.*—Any person procuring, or attempting to procure, any allowance for a person not entitled thereto, shall be deemed guilty of a misdemeanor and on conviction thereof, shall be punished by a fine of not less than one hundred dollars (\$100.00) nor more than five hundred dollars (\$500.00), or by imprisonment in the county jail for a period of not more than one year, or by both fine and imprisonment.

SEC. 8. *Motion to set aside allowance.*—In each case where an allowance is made to any woman under the provisions of this act, a judgment entry to that effect shall be entered upon the records of the juvenile court making such allowance, and it shall be the right of any taxpaying citizen at any time to file a motion to set aside such judgment, and on such motion the juvenile court, or the court to whom such motion may be taken on a change of venue, shall hear evidence, either with or without a jury, as either side may demand, and may make a new order granting or refusing such allowance, and from such order, so made, an appeal shall lie as in ordinary civil cases. If the judgment, making such allowance, is not appealed from or is affirmed on appeal, the person filing such motion shall pay all of the costs of such motion and proceedings subsequent thereto. Such motion may be renewed from time to time, but not oftener than once in any calendar year.

SEC. 9. *Repeal.*—All acts or parts of acts in conflict with this act are, in so far as they so conflict, hereby repealed.

SEC. 10. *Emergency clause.*—There being no adequate provision of law covering the subject of partial support of poor women, an emergency within the

meaning of the constitution is hereby declared to exist; therefore, this act shall take effect and be in force from and after its passage and approval.

Approved April 7, 1911. Amendment approved March 25, 1918.

OPERATION OF LAW IN JACKSON COUNTY.

By population limitation this law is applicable only to Jackson County. It is administered under the juvenile court of Jackson County at Kansas City. From June 2, 1911, to December 31, 1913, 144 applications were passed on by the court, of which number 62 were refused and 82 granted. During this period 22 of the allowances made were discontinued for the following reasons: In 8 cases the widows remarried; in 1, the husband was released from prison; in 2, the children were not being cared for; in 5, the incomes were considered sufficient for care of the children; in 6, request was made by the mothers that the allowance be set aside because they were in a position to care for their children by obtaining work.

For the month of December, 1913, 60 women were receiving assistance to the amount of \$394.50. The largest amount paid any family was \$25 and the smallest \$3, an average per family of \$14.74 a month. The average amount to each individual was \$3.27 per month; the average amount to each child \$4.21 per month.

In the 60 families 210 children were being benefited by the allowances, 168 under 14 years and 42 over 14 years. Of this number, 117 children were in ward school, 6 in high school, and 48 children were under school age; 20 of the children over 14 were at work; 22 were in school, 6 of these being in high school.

The law provides an appropriation of not exceeding \$12,000 a year for the payment of allowances to widows. During the month of January, 1914, 4 more widows were added to the pay roll, making the total \$928.50 per month. At the beginning of February, 1914, there were on file 28 applications with only \$71.50 left out of the \$1,000 available monthly for granting allowances. (From the report of J. L. Gillham, deputy probation officer in charge of widows' allowances, Feb. 4, 1914.)

FORMS USED IN JUVENILE COURT OF JACKSON COUNTY (KANSAS CITY).

APPLICATION OF WIDOW FOR ALLOWANCE.

Give your name in full: _____. Give your address: _____. Your age: _____. How long have you lived at your present address? _____. Do you own your own property? _____. What property have you, real or personal? State fully: _____. If you rent, who is your landlord? _____. What rent do you pay? _____. Amount of rent owing: _____. Account of outstanding debts: _____. Where were you born? _____. Nationality: _____. Where was your husband born? _____. Nationality: _____. Give his name in full: _____. Give place, cause, and date of his death: _____. Place and date of his imprisonment: _____. If your husband is dead, state what property he left, including life insurance: _____. Give the names of all your children; also date and place of birth: _____. How many children are living with you? _____. Name them: _____. If any of your children are married, give their names and addresses: _____. How long have you lived in Jackson County continuously last before the making of this application? _____. Give dates: From _____ to _____. State what your income is, including the salary of any child or children that you may have employed: _____. Have you any money in bank? _____. Amount: _____. What bank? _____. Do you authorize me to inquire of the bank? _____. Give date and place of your marriage: _____. Have you your marriage certificate? _____. How many times have you been married? _____. Give the name of your father: _____. Give his age and address, if living: _____. Give the name of your mother: _____. Give her age and address, if living: _____. Give the names and addresses of your brothers: _____. Give the names and addresses of your sisters: _____. Give the name of your husband's father: _____. Give his age and address, if living: _____. Give the name of your husband's mother: _____. Give her age and address, if living: _____. Give the names and addresses of your husband's brothers: _____. Give the names and addresses of your husband's sisters: _____. State what relief you have received from public or private sources: _____. Give amounts, and the names and locations of institutions: _____. Are you employed away from home? _____. If so, state where, giving name and address of your employer, and what you earn: _____. How long since your husband's death have you been employed away from home? _____. If an allowance is made you, what work can you procure and do at home, and what can you earn from it? _____. If the court refused you an allowance, would you be required to work regularly away from your home and children for their support? _____. What is the least amount that may be allowed you that would enable you to stay at home with your children and take care of them? _____. If an allowance is made will you agree to stay at home with your children and properly rear them? _____. At any time during your

married life were you and your husband separated or divorced? _____. Were you living with your husband at the time of his death? _____. Give name and address of your physician: _____. Will you notify the chief probation officer, in writing, of any change in your address promptly? _____. Give the names and addresses of five (5) persons who have known you at least two (2) years: _____.

State of Missouri, county of Jackson, ss:
_____ of lawful age, being duly sworn, on her oath states, that each and all the foregoing answers to the foregoing questions are identically as she made them, and that each and every statement in the above application is true.

Subscribed and sworn to before me, a notary public in and for Jackson County, Missouri, this ____ day of _____, 19____.

REFERENCE BLANK.

JUVENILE COURT,
OFFICE OF CHIEF PROBATION OFFICER,
Kansas City, Mo., _____.

DEAR SIR OR MADAM: Your name has been given us as reference by _____ of _____ who is applying for a widow's allowance. Will you please answer the following questions? Same will be treated strictly confidential:

How long have you known applicant? _____. How long has the applicant lived in Jackson County continuously? _____. Is she, in your opinion, a good moral Christian woman? (yes or no.) Does she go to church _____; if so, which? _____. Would she, in your opinion, give the children a good education? _____. What is her reputation for honesty? _____. What is the applicant's general reputation? _____. How does she care for her home? _____. Does she properly care for her children? _____. Would you consider applicant competent morally, physically, and mentally to rear children? _____. Name _____ Business or occupation _____. City or town _____ State _____.

Dated this ____ day of _____, A. D. 191____, at _____.

REPORT OF INVESTIGATOR.

Name of applicant: _____. Address: _____. Housing conditions: Family live in _____ rooms. Flat: _____. Tenement: _____. Detached house: _____. Rooming or boarding house: _____. Conditions in the home regarding sanitation and cleanliness: _____. Character of the neighbors and neighborhood, in regard to saloons, pool halls, etc.: _____. Would you advise removal in case that allowance was granted? _____. Why? _____. School record: Names of children attending school, age, grade (setting this information opposite each name): _____, _____. Religion: _____. Denomination: _____. Attendant: _____. Name of pastor: _____. Address: _____. Do children go to any church services? _____. Name of Sunday-school teacher: _____. Address: _____. Physical condition of each of the children, setting out if any of the children are abnormal in any way: _____. Literacy of the applicant: _____. Left school at what age: _____. Why did you leave? _____. Can the applicant read and write? _____. Has the applicant any physical defects? _____. Do you belong to any society benefit or otherwise? _____. Does the applicant use any intoxicating liquors? _____. Does the applicant use tobacco in any form? _____. Has the applicant ever been in jail or prison? _____ Date: _____, 191____.

_____, Investigator.

RECORD OF CASE.

Name.		Age.
Address:.....	No. of rooms.....	Wages earned by mother.....
Address:.....	No. of rooms.....	Wages of children.....
Address:.....	No. of rooms.....	Amt. received by other sources.....
Rent paid.....		Allowance granted.....
		Allowance granted.....
		Total.....

Allowance set aside and cause.....

Children's first name.	Date of birth.	Age.	Occupation or school grade.	Where employed or school attended.

Remarks: _____ Date,

CITY OF ST. LOUIS.

In St. Louis a municipal commission to study the question of the care of delinquent, dependent, and defective children, which made its report in 1911, recommended that every dependent child, not in need of hospital treatment,

be cared for in a family home, and that so far as possible the child should be kept with its own family or relatives. The commission recommended the appointment for St. Louis of a board of children's guardians. To permit this a special act was passed by the Missouri Legislature April 8, 1911, empowering cities of 500,000 inhabitants or more to create, by ordinance, a board of children's guardians, and authorizing such board to receive delinquent, dependent, and defective children and to place them in public institutions or with families, and permitting such city to provide for the payment of the care of any such child in any public institution or with any family. (Laws 1911, p. 849.)

The ordinance passed by St. Louis under the authority of this act is as follows:

[Revised Code of St. Louis, 1912. Appendix, p. 1135-1138. Ordinance 26565.]

An Ordinance Creating the board of children's guardians, defining the number of its members, their terms of office, their qualifications, duties and powers, authorizing said board to manage the St. Louis Industrial School, and authorizing said board to receive delinquent, dependent and defective children, and to place them in public institutions or with families, providing for the payment for the care of any such child, and making an appropriation therefor, and repealing section fifteen hundred and ten of the Revised Code of St. Louis (now sec. 15, Revised Code, 1912).

Be it ordained by the municipal assembly of the city of St. Louis, as follows:

SECTION 1. Establishment of the board of children's guardians.—There is hereby created a board of children's guardians of the city of St. Louis, to consist of seven members, who shall be appointed by the mayor, with the approval of the council, for a term of four years, and until their successors have been appointed and qualified; if any member should absent himself from five consecutive meetings of the board without giving an excuse satisfactory to the board and entered upon the record of the board, his office shall become vacant. Members of the board shall serve without compensation: *Provided, however,* That necessary expenses incurred in the discharge of their duties shall be refunded to them.

SEC. 2. Organization of the board.—Within thirty days after the passage of this ordinance, the mayor shall appoint two members to said board for a term of one year each, two members for a term of two years each, two members for a term of three years each, and one member for a term of four years, and thereafter, as these terms expire, the mayor shall appoint members for a term of four years. The board shall choose from among its members, a chairman and vice chairman and a secretary thereof, whose duty it shall be to keep a record of all proceedings of said board. The board shall have an office in the city hall or in such other municipal building, as may be designated by the mayor. The board shall meet on the second and fourth Tuesdays of each month, provided that if any meeting day should be a legal holiday, the board may select some other day for its meeting.

SEC. 3. Appointment of agent and visitors.—The board shall appoint an agent who may not be of their own number. Such agent shall receive a salary, payable out of the city treasury in monthly installments at the rate of twenty-one hundred dollars for the first year of service, with an increase of one hundred dollars per annum, for each year's additional service of the incumbent until a maximum of twenty-four hundred dollars shall be reached, when the maximum so attained shall be the rate thereafter. The board may appoint as many visitors as it may find necessary, not exceeding four in number, at a salary payable monthly at the rate of nine hundred dollars for the first year of service, with an increase of one hundred dollars per annum for each year's additional service of the incumbent until a maximum of twelve hundred dollars shall be reached, when the maximum so attained shall be the rate thereafter.

The board may also appoint a stenographer at a salary, payable monthly, at the rate of seven hundred dollars per annum, with an increase of one hundred dollars per annum for each year's additional service of the incumbent until a maximum of nine hundred dollars is attained, which shall be the rate thereafter. Actual disbursements for necessary expenses of employees in the performance of their duties such as transportation shall be allowed. The agent, visitors, and any other employees shall serve at the pleasure of the board. The appointment of the agent and visitors shall be made on merit only, after a public competitive examination conducted by the board or a committee thereof, under rules made a matter of public record of the board. All examinations shall be in writing. Successful applicants shall be required to answer such questions orally as requested by board.

SEC. 4. Duties of agent and visitors.—It shall be the duty of the agent to investigate all cases presented to the board, to be present when necessary in court as the board's agent, and to conduct the correspondence and general administrative work of the board, except in matters pertaining to the administration of the industrial school. The agent shall have charge of the placing and supervision of children under the direction of the board, it being the duty of the visitors herein provided for to visit and supervise such children under the direction of the agent. The duties of the agent and visitors may be further designated by the board.

SEC. 8.¹ Board given authority to take charge of children.—Said board of children's guardians shall have the power and authority to receive and take charge of any child upon commitment to it by any court of competent jurisdiction in the city of St. Louis, and upon application of its legal custodian to receive and take charge of any dependent or defective child for such care and treatment as such board may determine: *Provided, however,* That the board shall not take charge or consider any application for the care of a child who has not been a resident of the city for at least one year prior to the application, or, if a child under one year of age whose parents or guardian have not been residents of the city for at least one year prior to the making of the application, excepting foundlings and abandoned children whose parents or guardians are unknown.

SEC. 9. Board's authority in caring for children.—Said board of children's guardians shall have the power and authority to place any child in its charge for temporary custody in the house of detention; to place delinquent and defective children in any public institution within the State of Missouri for the care of delinquent and defective children, and to place dependent children in the St. Louis Industrial School, but only in case no suitable family homes can be found for them, and only until such homes can be found. Said board shall have the power and authority to place any child in its charge or under its control with any family qualified and able in the opinion of the board to provide for the comfort and wants of such child, and to care for its moral and physical welfare: *Provided,* That no child shall be placed with any family when the head thereof is of different religious affiliation from that of the child's parents or guardian, if such affiliation can be ascertained: *And provided further,* That no payment shall be made for the board of any child with such child's own father or mother, excepting with its own mother, when such mother is widowed, and then only after the board, through an investigation by its agents and at least one other independent investigation, has agreed that such board should be allowed: *And provided further,* That the board of children's guardians shall not place for board any child who has arrived at the legal working age (fourteen),

¹ Sections 5 to 7 relate to the administration of the industrial school.

unless such child is mentally or physically incapacitated for gainful employment. The board shall, so far as practicable, place children within the city of St. Louis, and when not practicable the children may be placed in the State within a radius of fifty miles of St. Louis.

SEC. 10. *Payment of board for children.*—For each child so placed by said board in any public institution within the State of Missouri, the city of St. Louis shall pay whatever sum may be fixed by statute or whatever sum may be agreed upon by said board not in excess of the sum fixed by statute. For the board and maintenance of every child placed with a family, the city shall pay whatever sum is agreed upon by said board of children's guardians, not in excess, however, of the sum of three dollars and fifty cents per week: *Provided, however,* That with the consent of the comptroller first had and obtained as evidenced by his certificate in each and every case, the said board may authorize and the city shall pay a greater amount, as fixed by the comptroller's certificate. In addition to said amount thus fixed, the city, upon the action of said board, may pay for clothing and for medical treatment not exceeding the sum of twenty-five dollars per year per child: *Provided, however,* That a greater sum may be authorized by said board and shall be paid by the city, upon the certificate of the comptroller having been first had and obtained in each and every case. All expenditures authorized by the board shall be certified by the board's agent and chairman.

SEC. 11. *Reports.*—Said board shall render a quarterly report, on the fifteenth day of February, May, August, and November of each year to the municipal assembly, and a monthly report to the mayor, showing the number of children in its charge and under its control, the manner in which each child came into said board's control, its age, sex, and color, the disposition of each case, the number of those finally discharged from the board's control, the amount of expenditures on account of the work of said board, and any and all information that the board may be able to furnish. The board shall make to the comptroller such fiscal reports as he may require.

Approved July 8, 1912.

The work of taking care of children dependent upon the public for support and boarding them with their mothers was not begun until December 9, 1913. Thirty children in nine families were being so cared for during February, 1914. The amount given has varied with the family, the family budget being ascertained and the deficit made up. (Letter from A. Fairbank, agent of the board, Feb. 23, 1914.)

NEBRASKA.

[Revised Statutes 1913, Article VII, 1245-1250.]

1245. **SEC. 118. *Jurisdiction.***—The district courts of the several counties in this State and the judges thereof in vacation, shall have original jurisdiction in all cases coming within the terms of this article: the county court in each county shall have concurrent jurisdiction with the district court, but such jurisdiction shall not be exercised by the county court except in the absence of the judge or judges of the district court from the county. * * * [Laws 1905, p. 306; Ann., 5450; Comp., 2796b.]

1246. **SEC. 119. *Juvenile court.***—In counties having over forty thousand population, the judges of the district court shall, at such times as they shall determine, designate one or more of their number, whose duty it shall be to hear all cases coming under this article. A special court room, to be designated as the juvenile court room, shall be provided for the hearing of such cases, and the finding of the court shall be entered in a book or books to be kept for that purpose, and known as the "juvenile record," and the court may for con-

venience be called the "juvenile court." [Laws 1905, p. 307; Ann. 5451; Comp., 2796c.]

1247. SEC. 120. *Petition*.—Any reputable person being a resident in the county, having knowledge of a child in his county who appears to be either neglected, dependent, or delinquent, may file with the clerk of court having jurisdiction in the matter, a petition in writing, setting forth the facts verified by affidavit. It shall be sufficient that the affidavit is upon information and belief. [Laws 1905, p. 307; Ann., 5452; Comp., 2796d.]

1248. SEC. 121. *Summons*.—Upon the filing of the petition, a summons shall issue requiring the person having custody or control of the child, or with whom the child may be, to appear with the child at a place and time stated in the summons, which time shall not be less than twenty-four hours after service.

* * * on the return of the summons or other process, or as soon thereafter as may be, the court shall proceed to hear and dispose of the case in a summary manner. * * * [Laws 1905, p. 307; Ann., 5453; Comp., 2796e.]

1249. SEC. 122. *Probation officers*.—The judge of the district court having charge of the juvenile docket shall have authority to appoint or designate two or more persons of good character, one of whom shall be a woman, to serve as probation officers during the pleasure of the court. Such officers shall perform the duties prescribed in this article for probation officers and such other duties as may be required by the judge of the juvenile court, * * *. In case a probation officer shall be appointed by any court, it shall be the duty of the clerk of the court, if practicable, to notify the said probation officer in advance, when any child is to be brought before the said court. It shall be the duty of the said probation officer to make such investigation as may be required by the court; to be present in court to represent the interests of the child when the case is heard; to furnish to the court such information and assistance as the judge may require. * * * [Laws 1905, p. 308; 1907, p. 186; Ann, 5454; Comp., 2796f.]

1250. SEC. 123. *Dependent children—Custody—Aid to parents*.¹—When any child under the age of eighteen years shall be found to be delinquent, dependent or neglected within the meaning of this article, the court may make an order committing the child to the care of some suitable institution or to the care of some reputable citizen of good moral character, or to the care of some association willing to receive it, embracing in its objects the purpose of caring for or obtaining homes for dependent or neglected children, which association shall have been accredited as hereinafter provided, or, if under the age of sixteen years, or if he pleads guilty to or is convicted of any crime, to the care of the State industrial school. The court may, when the health or condition of the child shall require it, cause the child to be placed in a public hospital or institution for treatment or special care, or in an accredited and suitable private hospital or institution which will receive it for like purposes. If the parent or parents of such dependent or neglected child are poor and unable to properly care for the said child, but are otherwise proper guardians and it is for the welfare of such child to remain at home, the court may enter an order finding such facts and fixing the amount of money necessary to enable the parent or parents to properly care for such child, and thereupon it shall be the duty of the county board, through its county agent or otherwise, to pay to such parent or parents, at such times as said order may designate the amount so specified for the care of such dependent or neglected child until the further order of the court: *Provided*, Not more than ten dollars per month shall be allowed for the care of each child: *And provided further*, No such

¹ The amendment providing aid to parents was approved April 5, 1913 (Laws 1913, chap. 88).

order shall be effective for more than six months, unless renewed by the court at or after the expiration of that period. All payments are to be made from the general fund of the county. [Laws 1905, p. 309; 1907, p. 187; 1911, p. 207; 1913, p. 133; Ann., 5455; Comp., 2796g.]

NEVADA.

[Laws 1913, chapter 133.]

An Act To amend an act entitled "An act relating to children who are now, or who may hereafter become dependent, neglected, or delinquent; to define these terms, and to provide for the treatment, control, maintenance, protection, adoption, and guardianship of the person of such child or children," approved March 24, 1909, said act as amended to provide a pension for dependent or neglected children.

The people of the State of Nevada, represented in senate and assembly, do enact as follows: SECTION 1. Section twelve of the said act is hereby amended to read as follows:

739. SECTION 12. *Guardianship, how perfected.*—Any child found to be dependent or neglected or delinquent as defined in this act and awarded by the court to a guardian institution or association, shall be held by such guardian institution or association, as the case may be, by virtue of the order entered in such case, and the clerk of the court shall issue and cause to be delivered to such guardian or association a certified copy of such order of the court, which certified copy of such order shall be proof of such guardian institution or association in behalf of such child. The guardianship under this act shall continue until the court shall by further order otherwise direct, but not after such child shall have reached the age of twenty-one (21) years, but if the parent or parents or grandparent or grandparents of such dependent or neglected child are poor and can not properly care for, maintain and properly educate such child, but are otherwise proper guardians and a person or persons of good reputation and morals, and shall covenant and agree that such child shall attend school regularly during all school days, when such child is of school age, or until said child shall have completed the eighth grade of the public grammar school, or school of like grades of studies, or have graduated in book-keeping and commercial course, the court may enter an order finding such facts, and fixing the amount of money necessary to enable the parent or parents or grandparent or grandparents to properly care for and educate such child, providing such amount shall not exceed the amount it would cost the county to have such child maintained and educated at any county or State home, or place provided for dependent or neglected children, in the State of Nevada, and thereupon it shall be the duty of the county board through its county agent, or otherwise, to pay to such parent or parents, or grandparent or grandparents, or blood aunt or blood uncle, the amount specified at such times as said order may designate for the care of such neglected or dependent child, until the further order of the court, and the court shall cease to sanction the payment of the specified amount whenever it shall appear that such child is not receiving the benefit it should from the payment of said specified amount of money.

SEC. 2. Any person or persons who shall violate any of the provisions of the said act as amended shall upon conviction thereof, be fined in any sum of money not less than one hundred dollars (\$100) nor more than five hundred dollars (\$500), or not less than sixty (60) days nor more than two hundred days (200) in the county jail, or by both such fine and imprisonment.

SEC. 3. All laws or parts of laws in conflict with this act as amended are hereby repealed. Any person or persons violating the provisions of this act as amended shall, upon conviction thereof, be fined in any sum of money not less than one hundred dollars (\$100) nor more than five hundred dollars (\$500), or not less than sixty (60) days, nor more than two hundred days (200) in the county jail, or by both such fine and imprisonment.

This act shall become effective on the first day of the commencement of the ensuing term of public school after its enactment and approval.

Approved March 20, 1913.

The provisions of the act of March 24, 1909, which relate to the courts having jurisdiction and the method by which cases of dependent children are brought into court are as follows:

[Revised Laws 1912.]

729. SEC. 2. Jurisdiction.—The district courts of the several judicial districts in this State shall have original jurisdiction in all cases coming within the terms of this act. * * *

730. SEC. 3. The findings of the court shall be entered in a book or books to be kept for that purpose and known as the "juvenile department," and the court may for convenience be called the "juvenile department of the district court."

731. SEC. 4. Petition.—Any reputable person, being a resident of the county, may file with the clerk of the court having jurisdiction of the matter, a petition in writing setting forth that a certain child, naming it, within his county, is either dependent, neglected or delinquent as defined in section 1 hereof; * * * The petition shall also set forth either the name, or that the name is unknown to petitioner (a) of the person having the custody of such child; and (b) of each of the parents or the surviving parent of a legitimate child; or of the mother of an illegitimate child; or (c) if it allege that both such parents are or such mother is dead, then of the guardian, if any, of such child; or (d) if it allege that both such parents are or that such mother is dead and that no guardian of such child is known to the petitioner. All persons so named in such petition shall be made defendants by name and shall be notified of such proceedings by summons if residents of this State in the same manner as is now or may hereafter be required in court proceedings by the laws of this State except only as herein otherwise provided. * * * The petition shall be verified by affidavit, which affidavit shall be sufficient upon information and belief. * * *

732. SEC. 5. Summons.—The summons shall require the person alleged to have the custody of the child to appear with the child at the time and place stated in the summons; and shall also require all defendants to be and appear and answer the petition on the return day of the summons. The summons shall be made returnable at any time within twenty days after the date thereof and may be served by the sheriff, or by any duly appointed probation officer, even though such officer be the petitioner. * * *

733. SEC. 6. Probation officers.—The district courts in this State shall have authority to appoint any number of discreet persons of good moral character to serve as probation officers during the pleasure of the court * * *. It shall be the duty of the clerk of the court, if practicable, to notify the said probation officer when any child is to be brought before the court; it shall be the duty of such probation officer to make investigation of such case; to be present in the court to represent the interests of the child when the case is heard; to furnish such court such information and assistance as the court or judge may require * * *.

NEW HAMPSHIRE.

[Laws 1913, chap. 123.]

An Act Making provision for the relief of destitute mothers and their children.

Be it enacted by the senate and house of representatives in general court convened: **SECTION 1. County to make appropriations.**—It shall be the duty of the county commissioners of each county to provide out of the moneys in the county treasury not otherwise appropriated an amount sufficient to meet the purposes of this law for the partial support of women, when such women are of good repute but poor and dependent on their own efforts for support and are mothers of children under the age of sixteen years.

SEC. 2. Amount of allowance.—The allowance to each of such women shall not exceed ten dollars (\$10) a month when she has but one child under the age of sixteen years, and if she has more than one child under the age of sixteen years, it shall not exceed the sum of ten dollars (\$10) a month for the first child and five dollars (\$5) a month for each of the other children under the age of sixteen years.

SEC. 3. Conditions of allowance.—Such allowance shall be made by the county commissioners upon the recommendation of the school board for the district in which such mother resides and only upon the following conditions: (1) The child or children for whose benefit the allowance is made must be living with the mother of such child or children; (2) the allowance shall be made only when in the absence of such allowance the mother would be required to work regularly away from her home and children, and when by means of such allowance she will be able to remain at home with her children; (3) the mother must, in the judgment of the school board, be a proper person, morally, physically and mentally, for the bringing up of her children; (4) such allowance shall in the judgment of the school board be necessary to save the child or children from neglect; (5) no person shall receive the benefit of this act who shall not have been a resident of the county in which such application is made for at least two years next before the making of such application for such allowance.

SEC. 4. When allowance shall cease.—Whenever any child shall reach the age of sixteen years an allowance made to the mother of such child shall cease. The school board for the district in which the mother resides may recommend at any time before such child reaches the age of sixteen years that the allowance to any mother and for any child be discontinued or modified and the county commissioners, in their discretion, may thereupon discontinue or modify the same.

SEC. 5. To whom law does not apply.—The provisions of this law shall not apply to any woman who is not dependent on her own efforts for the support of herself and family and at the time of receiving such aid is not of good repute and making an earnest effort for self support.

Approved May 7, 1913.

NEW JERSEY.

[Laws 1913, chap. 281.]

An Act To promote home life for dependent children.

Be it enacted by the senate and general assembly of the State of New Jersey: **1. Widow may petition court.**—Any widow who is the mother of a child or children under the age of sixteen, and who is unable to support them and to

maintain her home, may present a petition for assistance to the court of common pleas of the county wherein she resides.

2. *What petition must contain.*—Such petition shall be verified and shall set forth the following:

(a) Her name, the date of the death of her husband, the names of her children, and the dates and places of their birth and the time and place of her marriage.

(b) Her residence and the length of time that she has been a resident of the State, the length of time she has lived at said residence and the address or addresses of her place or places of abode for the previous five years, and the date, as near as possible, when she moved in and when she left said place or places of residence.

(c) A statement of all the property belonging to her and to each of her children, which statement shall include any future or contingent interests which she or any of them may have.

(d) A statement of the efforts made by her to support her children.

(e) The names, relationships and addresses of all her and her husband's relatives, that may be known.

3. *Officials to be notified.*—A copy of the petition provided for in section two hereof and a notice of the time and place when it will be presented to the court must be served on or mailed to the overseer of the poor having jurisdiction over the district wherein the petitioner resides and the board of children's guardians at least five days before such time.

4. *Investigation and hearing.*—Upon the return of the petition and notice the court shall examine under oath all who desire to be heard: *Provided, however,* That the New Jersey State Board of Children's Guardians shall before said hearing examine into the truth of the facts set forth in the above-mentioned petition and shall file a report of its findings with the court, setting forth in full the results of its investigation. The court may, in its discretion, issue subpoenas for the attendance of witnesses and adjourn the hearing from day to day: *And provided, however,* The court may refer said matter to a commissioner to be appointed by the court to hear such witnesses as shall be produced by the petitioner, or the State board of children's guardians or others. Said commissioner shall make a report to the court setting forth the facts as proven before him.

5. *Amount of allowance.*—If, upon the completion of the examination provided for under section four hereof, the court concludes that, unless relief is granted, the mother will be unable to properly support and educate her children, and that they may become a public charge, it shall make an order committing said family to the care of the State board of children's guardians, and directing that there shall be paid to the mother, through the State board of children's guardians, monthly out of the county funds the following amounts for the maintenance and support of the children under sixteen: Nine dollars for one such child, fourteen dollars for two and four dollars for each additional child.

6. *Duty of State board of children's guardians.*—It shall be the duty of the State board of children's guardians to see that any widow committed to its care, pursuant to the provisions of this act is properly caring for her children, that they are sufficiently clothed and fed, that they attend school regularly and receive proper religious instruction; and that said family shall be visited at least six times a year. The State board of children's guardians shall report immediately to the court that had the original jurisdiction in the case of any widow who does not properly care for and educate her child or children, or when they find that she is an improper guardian for said child or children, or when they find that she no longer needs such support. The court shall

thereupon revoke or cancel any order made pursuant to this act, at any time with or without notice, and in lieu thereof make any order that in the judgment of the court may protect the welfare of the child or children, or may make an order committing said child or children to the care, custody and control of the New Jersey State board of children's guardians, said child or children so committed to their care to be held by said New Jersey State board of children's guardians pursuant to a statute entitled "An act for the creation of a State board of children's guardians, and for defining their duties and powers with respect to the maintenance, care and general supervision over indigent, helpless, dependent, abandoned, friendless and poor children now or hereafter to become public charges of this State," approved March twenty-fourth, one thousand eight hundred and ninety-nine, and the various supplements and amendments thereto.

7. *No fees allowed.*—No fees or costs shall be paid or allowed by the court for any proceedings held pursuant to this act, nor shall any counsel fee be ordered or collected from any party applying to the court pursuant to the provisions of this act. All proceedings pursuant to this act shall be in forma pauperis.

Approved April 9, 1913.

FORMS ADOPTED BY STATE BOARD OF CHILDREN'S GUARDIANS.

LETTER INCLOSED WITH APPLICATION BLANKS.

NEW JERSEY STATE BOARD OF CHILDREN'S GUARDIANS,
Jersey City, N. J., ———, 19—.

DEAR MADAM: Your letter asking for information in regard to the mothers' pension bill has been received at this office. Under the law your petition must be made direct to the court of common pleas, which is held for your county at ———.

Under the law, it will be necessary for you to fill out the three inclosed blanks, answering fully every question thereon; otherwise you may cause serious delay in having your petition acted upon by the court. After you have answered these questions fully, and had the blanks sworn to before a person authorized to take affidavits, you must then file a copy with your county judge, also a copy with your local poormaster, and one with us.

I am also inclosing you a copy of the law, which will show you that in order to be eligible to receive this pension, 1st, you must be a widow; 2d, you must be a mother of children under sixteen years of age; 3d, you must have a legal residence in the county wherein you reside. A legal settlement under the poor law is five years' residence in the municipality. 4th, you must have no visible means of support and be liable to become a public charge.

If you have not resided in the county where you are living at this time for five years continuous, you will have to present your petition to the judge in the county where you have lived five years.

If you do not understand about this, I will be glad to have you write me, and I will advise you further in regard to this matter.

Yours, truly,

—————, General Agent.

NOTICE AND PETITION.

Court of common pleas of the county of ———. In the matter of the petition of ——— for relief under chapter 281 of the laws of 1913. Notice.

To the overseer of the poor of the ——— in the county of ——— and to the State board of children's guardians of the State of New Jersey:

Take notice, that on the ——— day of ——— one thousand nine hundred and —, at ten o'clock in the forenoon at the courthouse in ———, I shall present to the court of common pleas of the county of ——— a petition, a true copy of which is hereunto annexed.

Yours, respectfully,

Dated ———.

To the court of common pleas of the county of _____:

The humble petition of _____, widow of _____, in the county of _____, in the State of New Jersey, respectfully shows the name of your petitioner is _____.

The husband of your petitioner died on the _____ day of _____, one thousand nine hundred and _____.

The names of the children of your petitioner and the dates and places of their births are as follows: _____.

Your petitioner was married to her husband on the _____ day of _____, one thousand nine hundred and _____, at _____.

Your petitioner resides at _____, and has been a resident of the State of New Jersey for _____ years. Following are the various places of abode for the last five years, with the dates, as nearly as your petitioner can recollect the same, when she moved in and when she left said respective places of residence: _____.

Neither your petitioner or any of the children above named have any property or interests in property of any kind, future, or contingent, except as follows: _____.

Following is a statement of all property belonging to your petitioner or to either of the children above named, further or contingent: _____.

Following is a statement of the efforts made by your petitioner to support herself and her children: _____.

Following are the names, relationships, and addresses of all the relatives of herself and her deceased husband, so far as they are known to your petitioner: _____.

Your petitioner further states that unless relief is granted, your petitioner will be unable to properly support and educate her children and that they may become a public charge.

Your petitioner therefore prays that this honorable court shall make an order committing your petitioner and the children above named to the care of the State board of children's guardians, and directing payment to your petitioner through said board monthly, out of the county funds, of the sums of money specified in the act entitled "An act to promote home life for dependent children," approved April 9, 1913, being chapter 281 of the Laws of 1913.

And your petitioner as in duty bound will ever pray, etc.

_____, Petitioner.

Dated at _____.

State of New Jersey, county of _____, ss:

_____, of full age, being duly sworn according to law, on her oath deposes and says that she is the petitioner above named; that the facts, matters, and things in said petition set forth are true.

Sworn to and subscribed before me this _____ day of _____, A. D. 19____, at _____.

LETTER TO CHARITY ORGANIZATION AND POOR MASTERS.

DEAR SIR: We have received a notice that Mrs. _____, of _____, has presented a petition to the court of common pleas of the county of _____, for relief under chapter 281, Laws of 1913.

The law requires us to make an investigation and verify the statements made in this petition. Will you kindly cooperate with us in this case by answering the questions asked on blank attached below and return to this office?

Thanking you, I am, yours, truly,

_____, General Agent.

1. Do you know Mrs. _____, of _____? _____ 2. How long have you known her? _____ 3. Has she ever been given assistance by your organization? If so, how much, in what way, and when? _____ 4. During the time you have known her, has she properly cared for, first, her home, _____; second, her children, _____ 5. What means of support other than what she received from you has she had during the time she has been under your supervision? _____ 6. Have you had any report about the children being abnormal or incorrigible? _____ 7. Is the mother of good moral character? _____

Signed _____.

Title _____.

Name of Association _____.

LETTER TO COUNTY COUNSEL.

DEAR SIR: You are hereby notified that a petition for relief under chapter 281, Laws of 1913, has been presented to the court of common pleas by _____.

While the law does not provide for notice to the board of freeholders, yet, in view of the fact that such sums as may be allowed are payable out of the county treasury, we deem it proper that you should have such notice in order that the county may be represented at the hearing.

The hearing will be held _____ at _____ before _____.

We will be very glad of your cooperation and will furnish you with a copy of the report of our investigation on this case, if you so desire.

Yours, truly,

_____, General Agent.

REPORT OF STATE BOARD.

Court of common pleas of the county of _____. In the matter of the petition of _____ for relief under chapter 281 of the Laws of 1913. Report of State board.

The State board of children's guardians hereby reports to the court its findings as the result of its investigation into the petition filed in the above-entitled matter.

The facts stated in the said petition as to the name of the petitioner, date of death of her husband, names and ages of her children and their places of birth, time and place

54 MOTHERS' PENSIONS IN UNITED STATES—NEW JERSEY.

of her marriage, her residences and places of abode, and of the property interests belonging to her and her children are true, except that _____.

This board has found the efforts of the petitioner to support her children have been as follows: _____.

This board reports that as the result of its investigation it finds that the said petitioner is _____ able to support her said children, and they are _____ likely to become public charges.

Respectfully submitted this _____ day of _____, one thousand nine hundred and _____.

THE STATE BOARD OF CHILDREN'S GUARDIANS,

By _____, General Agent.

Name of petitioner, _____ Place of birth, _____ Nationality, _____.

Residence, _____ Character of residence, _____ How long a resident there, _____.

Previous residence, _____ How long, _____ Previous residence, _____ How long, _____.

(Procure previous residence and length of each, for five years. Inquire of landlords or agents.)

Name of husband, _____ Date of marriage, _____ Place of marriage, _____.

By whom married, _____ Date of death of husband, _____ Where

husband is buried, _____.

Children: Name, _____ Date of birth, _____ Place of birth, _____ If

baptized, where? _____.

Church attended by petitioner, _____ Name of pastor, _____.

Husband's relatives: Name, _____ Relationship, _____ Address, _____ Cir-

cumstances, _____.

Petitioner's relatives: Name, _____ Relationship, _____ Address, _____ Cir-

cumstances, _____.

Real estate owned by petitioner, _____ Real estate owned by children, _____.

Personal property owned by petitioner, money in bank, building and loan shares, etc., _____.

Personal property owned by children, money in bank, building and loan shares, etc., _____.

Remarks, _____.

LETTER TO PETITIONER WHEN PETITION IS READY FOR COURT HEARING.

DEAR MADAM: Your petition for relief under chapter 281, Laws of 1912, known as the widow's pension law, will be heard by Judge _____ at courthouse, in _____, on _____, at _____ o'clock.

Please be at the courthouse at that time and bring with you the following: Marriage certificate; husband's death certificate; birth certificates of all children under 16 years of age. You can obtain these, without any expense, by mailing the inclosed blanks after you have filled them out to the bureau of vital statistics, statehouse, Trenton, N. J. Also bring bill of your husband's funeral expenses.

If you are under the care of a physician, get a certificate from the physician stating what he is treating you for and how long he has been treating you.

Also get certified letters from the landlords where you have resided for the last five years or bring your rent receipts covering the last five years.

Bring two witnesses not relatives who know you and can vouch for your statements in your petition.

Unless you can produce these certificates for the date set for the hearing of your petition, your case will not be heard on that day.

Yours, truly,

_____, General Agent.

REPORT FROM TEACHER.

Date, _____ Name of child, _____ Address, _____ Living with, _____.

Record of church attendance, _____ Record of Sunday school attendance, _____.

Remarks, _____.

Very truly, yours,

_____, Pastor.

Name of church, _____ Address, _____.

SCHOOL CARD.

CHURCH CARD.

Name of child.....

Date.	Name of church.	Name of pastor.	Jan.		Apr.		July.		Oct.	
			C.	S.	C.	S.	C.	S.	C.	S.

NEW YORK.

[Laws 1913, chap. 588.]

An Act To establish a commission to inquire into the subject of pensions or other relief for widowed mothers, and making an appropriation therefor.

The people of the State of New York, represented in senate and assembly, do enact as follows: SECTION 1. *Duties of commission—Report.*—Within thirty days after this act takes effect there shall be appointed in the manner hereinafter provided a commission whose duty it shall be to make inquiry, examination and investigation into the practicability and appropriate method of providing by statute for pensions or other relief for widowed mothers, including such an investigation of the circumstances affecting such persons as may show the necessity or propriety of providing for such pensions or relief, and for the purposes of such investigation the commission may inquire into conditions and statutes in any State or country. Such commission shall submit its report on such matters, including such recommendations for legislation in the form of a bill or bills, or otherwise, as in its judgment may seem proper, to the legislature of nineteen hundred and fourteen.

SEC. 2. *Membership.*—Such commission shall consist of three senators to be appointed by the temporary president of the senate, five members of the assembly to be appointed by the speaker of the assembly, and seven other persons, not members of the legislature, to be appointed by the governor. Such commission shall elect from its number a chairman and may appoint a secretary.

SEC. 3. *Expenses.*—The members of such commission shall serve without compensation, but each member shall be entitled to his actual necessary expenses incurred in the performance of his duties under the provisions of this act.

SEC. 4. *Powers.*—For the purposes of its investigation such commission is hereby authorized to send for persons and papers, to administer oaths and to examine witnesses and papers respecting all matters pertaining to the subjects referred to in the first section of this act and to employ all necessary clerical and other assistants, within the appropriation therefor. If such commission shall appoint from its members subcommittees to make inquiry into one or more of such subjects, such subcommittees shall have the same powers in respect to sending for persons and papers, administering oaths and examining witnesses and papers, as are herein conferred upon the commission.

SEC. 5. *Appropriation.*—The sum of fifteen thousand dollars (\$15,000), or so much thereof as may be necessary, is hereby appropriated out of any moneys in the State treasury not otherwise appropriated for the expenses of such commission and its members under the provisions of this act, to be paid by the State treasurer upon the warrant of the comptroller upon vouchers approved by the chairman of such commission.

SEC. 6. This act shall take effect immediately.

Approved May 17, 1913.

Members of the commission: Aaron J. Levy (chairman); Frederick S. Burr, E. Frank Brewster, Hannah B. Einstein, Anthony J. Griffin, William Hard, John D. Lindsay, Sophie Irene Loeb, Martin G. McCue, Henry W. Pollock, James M. Rozan, William I. Sirovich, Thomas K. Smith, Ralph W. Thomas, Ansley Wilcox. Secretary, Richard M. Neustadt. Director of investigation, Robert W. Hebbard.

The commission made a preliminary report to the legislature March 20, 1914 (Senate No. 53), and submitted a bill providing for relief to children of widowed mothers. The bill fixes "allowances" of not more than \$20 a month for widowed mothers with one child under 16 years of age, \$15 for a second child, and \$10 for each additional child to a monthly maximum of \$60. The entire administration of the pensions in each county is placed in the hands of a county board of child welfare of seven members, appointed by the county judge as follows: The county superintendent of the poor, ex officio member; one representative each of the county education authorities, the public health authorities, and the juvenile or county court; and three additional members, two at least of whom shall be women. For New York City the board of child welfare is increased to nine members, appointed by the mayor, with the commissioner of public charities ex officio member in place of the county superintendent of the poor. The entire cost of the pensions is to be borne by the local authorities, whose action in making appropriations is, however, optional. The bill recommended by the commission passed the assembly, but did not come to a vote in the senate before the regular session of the legislature came to an end on March 27, 1914.

OHIO.

[Laws 1913, p. 877-9.¹ Part of Children's Code.²]

SEC. 1683-2. Allowance to poor mothers.—For the partial support of women whose husbands are dead, or become permanently disabled for work by reasons of physical or mental infirmity, or whose husbands are prisoners or whose husbands have deserted, and such desertion has continued for a period of three years, when such women are poor, and are the mothers of children not entitled to receive an age and schooling certificate, and such mothers and children have been legal residents in any county of the State for two years, the juvenile court may make an allowance to each of such women, as follows. Not to exceed fifteen dollars a month, when she has but one child not entitled to an age and schooling certificate, and if she has more than one child not entitled to an age and schooling certificate, it shall not exceed fifteen dollars a month for the first child and seven dollars a month for each of the other children not entitled to an age and schooling certificate. The order making such allowance shall not be effective for a longer period than six months, but upon the expiration of such period, said court may from time to time, extend such allowance for a period of six months, or less. Such homes shall be visited from time to time by a probation officer, agent of an associated charities organization, a humane society, or such other agents as the court may direct, provided that the

¹ See also General Code, 1910, section 7777, which provides for relief (books and clothing) to be furnished out of the contingent funds of the school districts to poor children to enable them to attend school. (Laws 1902, sec. 4022-9.) A similar provision was passed in Indiana in 1913.

² The commission to codify and revise the laws of Ohio relative to children, which made its report to the legislature in 1912, was not agreed as to the desirability of enacting a "widows' pension" law at that time. The bill drafted by the commission as the form recommended should the legislature desire to pass such a law was that enacted in 1913.

person who actually makes such visits shall be thoroughly trained in charitable relief work, and the report or reports of such visiting agent shall be considered by the court in making such order.

SEC. 1683-3. *Conditions of allowance.*—Such allowance may be made by the juvenile court, only upon the following conditions: First—the child or children for whose benefit the allowance is made, must be living with the mother of such child or children; second—the allowance shall be made only when in the absence of such allowance, the mother would be required to work regularly away from her home and children, and when by means of such allowance she will be able to remain at home with her children, except that she may be absent for work for such time as the court deems advisable; third—the mother must, in the judgment of the juvenile court, be a proper person, morally, physically and mentally, for the bringing up of her children; fourth—such allowance shall in the judgment of the court be necessary to save the child or children from neglect and to avoid the breaking up of the home of such woman; fifth—it must appear to be for the benefit of the child to remain with such mother; sixth—a careful preliminary examination of the home of such mother must first have been made by the probation officer, an associated charities organization, humane society, or such other competent person or agency as the court may direct, and a written report of such examination filed.

SEC. 1683-4. *When allowance shall cease.*—Whenever any child shall reach the age for legal employment, any allowance made to the mother of such child for the benefit of such child shall cease. The juvenile court may, in its discretion, at any time before such child reaches such age, discontinue or modify the allowance to any mother and for any child.

SEC. 1683-5. *Partial relief.*—Should the fund at the disposal of the court for this purpose be sufficient to permit an allowance to only part of the persons coming within the provisions of this act, the juvenile court shall select those cases in most urgent need of such allowance.

SEC. 1683-6. *To whom law does not apply.*—The provisions of this act shall not apply to any woman who, while her husband is imprisoned receives sufficient of his wages to support the child or children.

SEC. 1683-7. *Penalty for fraud.*—Any person or persons fraudulently attempting to obtain any allowance for a person not entitled thereto, shall be deemed guilty of a misdemeanor and on conviction thereof, shall be punished by a fine of not less than five nor more than fifty dollars, or imprisoned in the county jail, for a period of not less than two months, or both.

SEC. 1683-8. *Motion to set aside allowance.*—In each case where an allowance is made to any woman under the provisions of this act, a record shall be kept of the proceedings, and any citizen of the county may, at any time, file a motion to set aside, or vacate or modify such judgment and on such motion said juvenile court shall hear evidence, and may make a new order sustaining the former allowance, modify or vacate the same, and from such order, error may be prosecuted, or an appeal may be taken as in civil actions. If the judgment be not appealed from, or error prosecuted, or if appealed or error prosecuted, and the judgment of the juvenile court be sustained or affirmed, the person filing such motion shall pay all the costs incident to the hearing of such motion.

SEC. 1683-9.—*County board to levy tax.*—It is hereby made the duty of the county commissioners to provide out of the money in the county treasury such sum each year thereafter as will meet the requirements of the court in these proceedings. To provide the same they shall levy a tax not to exceed one-tenth of a mill on the dollar valuation of the taxable property of the county. Such levy shall be subject to all the limitations provided by law upon the aggregate amount, rate, maximum rate and combined maximum rate of taxation. The

county auditor shall issue a warrant upon the county treasurer for the payment of such allowance as may be ordered by the juvenile judge.

Passed April 28, 1913. Approved May 9, 1913. Filed in office of secretary of state May 13, 1913.

OKLAHOMA.

[Laws 1907-08, p. 394-5, as amended by article 13, chapter 219, Laws 1913.]

SECTION 4. "*Scholarships*" for wage-earning children of widows.—If any widowed mother shall make affidavit to the effect that the wages of her child or children, under sixteen years of age are necessary to the support of such widowed mother, then the county superintendent of public instruction shall after careful examination, upon the recommendation of the school district board, or board of education, furnish such child or children a certificate called a "scholarship" stating the amount of wages such child or children are receiving, or so much of such wages as shall be deemed necessary so long as such child or children shall attend the public school in accordance with the provisions of this article, which aid shall be allowed and paid upon certificate of the county superintendent of public instruction to the child or children holding such scholarship, by the county commissioners.

No reports available as to the aid being given widowed mothers with young children by the counties under this provision. (Letter from H. A. Duke, assistant superintendent of public instruction, Dec. 24, 1913.)

OREGON.

[Laws 1913, chap. 42.]

An Act To provide for the assistance and support of women whose husbands are dead or are inmates of some Oregon State institution or who are physically or mentally unable to work and who have a child or children dependent for support wholly or partly upon their labor.

Be it enacted by the people of the State of Oregon: SECTION 1. *Allowance to poor mothers.*—Every woman, who has one or more children under the age of sixteen years and whose husband is either dead or is an inmate of some Oregon State institution, or by reason of physical or mental disease is wholly unable to work, and whose support and the support of whose child or children is dependent wholly or partly upon her labor, shall be entitled to the assistance as provided for in this act for the support of herself and of her child or children.

SEC. 2. *Amount of allowance.*—Subject to subsequent provisions of this act, every woman, as provided in section 1, who is herself, and all of whose children are wholly dependent upon her labor for support shall receive from the public moneys of the county in which she and her child or children reside the sum of ten dollars per month for one child, and if she have more than one residing with her, seven dollars and fifty cents per month for each of such additional children.

SEC. 3. Subject to subsequent provisions of this act, every woman, as provided by section 1, who is herself and all of whose children are, partly dependent upon her labor for support shall receive from the public moneys of the county in which she and her child or children shall reside, such a sum per month as, added to her other income (other than that derived from her labor), shall be equal to the amount which she would receive if she was subject to the provisions of section 2 of this act.

SEC. 4. *To whom law does not apply.*—The provision of this act shall not apply to any child which has property of its own sufficient for its support, nor to any child which does not reside with its mother.

SEC. 5. *Purpose of act.*—It is the purpose and intention of this act to keep the children, to which it is applicable, together under the guidance and control of their mother, and that the mother shall make a home for the children; and if, in the judgment of the tribunal which is to administer this law as hereinafter provided, any mother of such children is improvident, careless or negligent in the expenditure of the money received pursuant to this act, such tribunal may direct that such money shall be paid to some person, whom it shall designate, to be used for the support of such mother and children.

SEC. 6. *Jurisdiction.*—The juvenile court in each county or whatever tribunal is charged by law with the discharge of the duties of such court, shall have exclusive jurisdiction in carrying out and administering the provisions of this act.

SEC. 7. *Payment.*—Whenever the tribunal, mentioned in section 6, shall determine that an allowance under this act shall be made, it shall make an order to that effect which order, among other things, shall set out in full the name of the mother, her place of residence, the names and ages of each of the children, and the amount allowed to each child, and upon presentation of such order, the county court shall direct monthly warrants to be drawn therefor.

SEC. 8. *Court may compel attendance of witnesses.*—For the purpose of carrying out the provisions of this act, the tribunal, mentioned in section 6, shall have power to summon witnesses and compel their attendance and pay them the same as witnesses in criminal cases are paid.

SEC. 9. *When allowance shall cease.*—Whenever any woman on whose account any allowance shall have been made under the provisions of this act, shall marry, such allowance shall cease. No allowance for any child shall continue after such child shall have reached the age of sixteen years.

SEC. 10. *Residential requirement.*—This act shall apply only to women who are residents of this State at the time this act is passed or who were residents of the State at the time of the occurrence of the events which entitle them to the benefits of this act as provided by section 1.

Filed in the office of the secretary of state February 10, 1913.

PENNSYLVANIA.

[Laws 1913, No. 80.]

An Act Applicable to all counties of this Commonwealth, to provide monthly payments, as approved by the trustees, to indigent, widowed, or abandoned mothers, for partial support of their children in their own homes. The manner of appointment of the trustees; the administration of the trust; amount of appropriations, proportioning appropriations, coordinate appropriations; amounts to be paid, form of records, eligibility, penalties, and reports, as set forth.

SECTION 1. *Trustees.*—*Be it enacted etc.,* That on and after the passage of this bill, and its approval by the governor of the Commonwealth, the chief executive shall appoint not less than five and not more than seven women, residents of each county desiring to avail itself of the provisions of this act,¹

¹ Out of the 67 counties in the State only 5 counties—Philadelphia, Allegheny, Luzerne, Schuylkill and Beaver—had made application to the governor for the appointment of trustees up to January 19, 1914. These comprise about 42 per cent of the total population of the State.

to act as trustees, in whom shall be intrusted the carrying into effect the provisions of this act, to provide monthly payment, as approved by the trustees, to indigent, widowed, or abandoned mothers, for partial support of their children in their own homes; such payment to be made direct to the recipient by the State treasurer, upon warrants drawn by the auditor general, and direct to the recipient by the county treasurer. Such payments to continue at the will of the trustees, but not beyond the time that the law will permit a child to secure employment.

Sec. 2. Administration.—The administration of this act shall lie solely in the hands of the trustees appointed annually by the governor. They shall serve without pay; but shall be permitted to charge for traveling expenses, in making investigations of cases before a final recommendation is made to the auditor general and county treasurer. The trustees shall provide a headquarters and appoint an investigator, and a stenographer (if necessary) also suitable furnishings, stationery, and postage; but at no time shall the yearly expense be more than three thousand dollars for counties with cities of the first class, twenty-four hundred dollars for counties with cities of the second class, eighteen hundred dollars for counties with cities of the third class, and twelve hundred dollars for counties other than the aforesaid classes, with the exception of the first year, when the trustees shall be permitted to expend an additional sum of not more than five hundred dollars, if necessary, for furnishings. In order to carry the provisions of this act into effect an appropriation of two hundred thousand dollars, from moneys not otherwise appropriated, is hereby made; proportioned to the counties of the Commonwealth, according to their respective population in the census of one thousand nine hundred and ten, by the auditor general and State treasurer; upon the passage and approval of this bill, the State treasurer shall place the proportionate amount of the entire appropriation to the various counties, upon the books of the State treasury, to the credit of the trustees; one-half of which amount shall be available the first year after approval, and the remainder the second year, or until another appropriation may become available: *Provided, however,* That no county, through their trustees or otherwise, shall receive their allotment of the State's appropriation unless an equal amount has been provided by the government of such county desiring the benefits under this act.

Sec. 3. Conditions and amount of aid.—The trustees shall in no case recommend payment to any widow or abandoned mother until they are thoroughly satisfied that the recipient is worthy in every way, and that, in order to keep her children in her own home, a monthly payment is necessary; but then only upon satisfactory reports from a teacher in the district school, stating that the child or children of the recipient of this fund are attending school, provided they are of proper age and physically able to do so. The combined total maximum payment shall not exceed twelve dollars per month for one child, twenty dollars per month for two children, twenty-six dollars per month for three children, and five dollars per month for each additional child. These payments to continue at the will of the trustees, but not beyond the time that the law will permit a child to secure employment.

Sec. 4. Records to be kept.—Four copies of a complete record of each family that is in receipt of any payment under the provisions of this act—the number of children, their full names, ages, and places of residence—shall be provided: one copy to be on file in the office of the trustees, as a public record; one copy to be kept as a record in the juvenile court, and in counties where no such court exists, the records shall be kept on file in the orphans' court; and one copy to be forwarded with each application for a warrant to the auditor gen-

eral, and one copy to the county treasurer. The copy to the auditor general and the county treasurer shall be sworn to by the investigator, and approved by at least a majority of the trustees.

SEC. 5. Residential requirement.—No family shall be a beneficiary under this act unless the mother has been a continuous resident of the county, in which she is applying for the benefits under this act, for a period of three years.

SEC. 6. Penalty for fraud.—Any person securing an allowance not entitled thereto shall be declared guilty of a misdemeanor, and shall be punished by a fine of not more than five hundred dollars, or imprisonment for not more than one year, or both, as the court may decide.

SEC. 7. Report.—A detailed report of the number of beneficiaries, the amount expended, the advantages and disadvantages of the system, improvements and recommendations, shall be made by the trustees to the members of the general assembly, at the beginning of the session of one thousand nine hundred and fifteen.

SEC. 8. Repeal.—All laws or parts of laws inconsistent with the provisions of this act are hereby repealed.

Approved the 29th day of April, A. D. 1913.

SOUTH DAKOTA.

[Laws 1913, chap. 275.]

An Act Entitled, an act to provide for the partial support of women whose husbands are dead, permanently disabled, or prisoners when such women are poor and the mothers of children and empowering the county court to make such allowance, prescribing the conditions under which such allowance shall be made and the extent thereof, and authorizing, empowering and making it the duty of the county commissioners to provide a fund for the carrying out of the provisions of this act, and for the revocation of any order made for such allowance and an appeal for such order, and providing a penalty for attempting to obtain an allowance for a person not entitled to the same.

Be it enacted by the Legislature of the State of South Dakota:

SECTION 1. Allowance to poor mothers.—For the partial support of women whose husbands are dead or become permanently disabled for work by reasons of physical or mental infirmity, or whose husbands are prisoners, when such women are poor and are the mothers of children under the age of fourteen years, and such mothers and children have a legal residence in any county of this State, the county court is hereby authorized and empowered to and shall make an allowance to each of such women, upon petition and notice as hereinafter set out, as follows: Not to exceed fifteen dollars a month, when such woman has but one child under the age of fourteen years, and if she has more than one child under the age of fourteen years, it shall not exceed fifteen dollars a month for the first child and seven dollars a month for each of the other children under the age of fourteen years. The order making such allowance shall not be effective for a longer period than six months, but upon the expiration of such period said court may from time to time extend such allowance for a period of six months or less, providing the court is satisfied that such order of extension is proper.

SEC. 2. Petition—Conditions of allowance.—Such allowance shall be made by the county court upon a verified petition made by such poor woman or by some member of the board of county commissioners of said county or by any other charitable organization or association within such county. Upon presentation

of such petition to the court the county court shall proceed to examine into the effects and shall make such allowance only upon the following conditions:

1. The child or children for whose benefit the allowance is to be made must be living with the mother of such child or children.

2. The allowance shall be made only when in the absence of such allowance the mother would be required to work regularly away from her home and children, and when by means of such allowance she will be able to remain at home with children, except that she may be absent not more than one day a week for work; or when it is deemed and found to be absolutely necessary for the proper care and education of said children;

3. The mother must in the judgment of the court be a proper person morally, physically and mentally, for the bringing up of her child;

4. Such allowance shall in the judgment of the court be necessary to save the child or children from neglect and to avoid the breaking up of the home of such women;

5. It must appear to be for the benefit of child to remain with such mother;

6. A careful preliminary examination of the home of such mother must first have been made by either the State's attorney or some officer of a charities organization or humane society or such other competent person as the court may direct and a written report of such examination filed with the court.

SEC. 3. *When allowance shall cease.*—Whenever any child shall reach the age of fourteen years any allowance made to the mother of such child for the benefit of such child shall cease. The county court may in its discretion at any time before such child reaching the age of fourteen years discontinue or modify the allowance to any mother and for her child.

SEC. 4. *Partial relief.*—Should the fund hereinafter provided for and at the disposal of the court for this purpose be sufficient to permit an allowance to only a part of the persons coming within the provisions of this act, the county court may and shall select those cases in most urgent need of such allowance.

SEC. 5. *To whom law does not apply.*—The provisions of this act shall not apply to any woman who while her husband is imprisoned receives sufficient of his wages to support the child or children.

SEC. 6. *Penalty for fraud.*—Any person or persons attempting to obtain any allowance for a person not entitled thereto shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not less than five nor more than fifty dollars or by imprisonment in the county jail for a period not exceeding thirty days or by both such fine and imprisonment.

SEC. 7. *Motion to set aside allowance.*—In each case where an allowance is made to any woman under the provisions of this act an entry to that effect shall be entered upon the records of the county court making such allowance and any citizen of the county may at any time file a motion to set aside or vacate or modify such judgment and on such motion and upon such notice as the county court shall deem proper the said court shall hear evidence and may make a new order sustaining the allowance, modify or vacate the same, and an appeal may be taken from such order to the circuit court or supreme court as in civil actions. If the judgment be not appealed from or if the appeal be not prosecuted and the judgment of the county court be sustained or affirmed the person filing such motion shall pay all the costs incident to the hearing on such motion. Such motion may be renewed from time to time but not oftener than once in any calendar year.

SEC. 8. *County commissioners to levy tax.*—It is hereby made the duty of the county commissioners to provide out of the moneys in the county treasury such sum each year as will meet the requirements of the court and will pay the allowances made by said court as herein provided. To provide for such

moneys the said county commissioners may levy a tax not to exceed one-tenth of a mill on the valuation of the taxable property of the county. The county treasurer shall pay such allowances upon orders made by the judge of the county court of such county.

SEC. 9. *Repeal.*—All acts or parts of acts in conflict with this act are in so far as they conflict with this act hereby repealed.

Approved March 14, 1913.

UTAH.

[Laws 1913, chap. 90.]

An Act To provide for the partial support of mothers who are dependent upon their own efforts for the maintenance of their children, and giving county commissioners and juvenile court jurisdiction in such matters.

Be it enacted by the Legislature of the State of Utah: SECTION 1. *County commissioners to provide funds.*—It shall be the duty of the county commissioners of each county in this State, and they are hereby authorized and empowered to provide funds in an amount sufficient to meet the purposes of this law, but not exceeding in any one year the sum of ten thousand dollars, such funds to be expended for the partial support of mothers who are dependent upon their own efforts for the maintenance of their children.

SEC. 2. *Amount of allowance.*—The allowance to each of such mothers shall not exceed ten dollars a month when she has but one child under the age of fifteen years and if she has more than one child under the age of fifteen years, it shall not exceed the sum of ten dollars a month for the first child and five dollars a month for each of the other children under the age of fifteen years.

SEC. 3. *Conditions of allowance.*—Such allowance shall be made by the county commissioners, except in counties having a population of one hundred and twenty-five thousand or more, the authority, power and duty of determining upon allowance to be made under the provisions of this act shall devolve upon and be exercised by the juvenile judge of the district in and for such counties. Such allowance shall be made only upon the following conditions:

(1) The child or children for whose benefit the allowance is made must be living with the mother of such child or children;

(2) The allowance shall be made only when in the absence of such allowance a mother would be required to work regularly away from her home and children, and when by means of such allowance she will be able to remain at home with her children;

(3) The mother must in the judgement [judgment] of the county commissioners or juvenile court, be a proper person morally, physically and mentally for the bringing up of her children. [;]

(4) Such allowance shall, in the judgement [judgment] of the county commissioners or juvenile court be necessary to save the child or children from neglect;

(5) No persons [person] shall receive the benefit of this act who shall not have been a resident of the county in which such application is made for at least two years next before the making of such application for such allowance.

SEC. 4. *When allowance shall cease.*—Whenever any child shall reach the age of fifteen years, any allowance made the mother of such child for the benefit of such child shall cease. The county commissioners or juvenile court may, in their discretion, at any time before such child reaches the age of fifteen years, discontinue or modify the allowance to any mother and for any child.

SEC. 5. *Partial relief.*—Should the fund herein authorized be sufficient to permit an allowance to only a part of the persons coming within the provisions

64 MOTHERS' PENSIONS IN UNITED STATES—WASHINGTON.

of this law, the county commissioners or juvenile court shall select those cases in most urgent need of such allowance.

SEC. 6. *To whom law does not apply.*—The provisions of this law shall not apply to any mother who is not dependent upon her own efforts for the maintenance of her children.

SEC. 7. *Penalty for fraud.*—Any person procuring, or attempting to procure, an allowance for a person not entitled thereto, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished as now provided by law for punishment in case of misdemeanors.

SEC. 8. *Motion to set aside allowance.*—In each case where an allowance is made to any mother under the provisions of this act, an entry to that effect shall be entered upon the records of the county commissioners or the juvenile court making such allowance, and it shall be the right of any tax-paying citizen at any time to file a motion to set aside such allowance; and on such motion the county commissioners or juvenile court shall hear evidence, and may make a new order granting or refusing such allowance.

SEC. 9. *Appeal.*—In each case where an allowance is made or refused to any mother, under the provisions of this act, by the county commissioners or juvenile court, an appeal may be taken from such decision by any tax-paying citizen, or by the applicant for an allowance; such appeal shall be subject to the same provisions of law as in case of appeal from justices courts.

Approved March 20, 1913.

WASHINGTON.

[Laws 1913, chap. 179.]

An Act Relating to the support of certain destitute women who are mothers, and prescribing penalties for those who fraudulently obtain the benefit thereof.

Be it enacted by the Legislature of the State of Washington: SECTION 1. *County aid to mothers.*—In every county it shall be the duty of the county commissioners to provide out of the moneys of the county treasurer an amount sufficient to meet the purposes of this law, for the support of women, whose husbands are dead, or are inmates of a penal institution or an insane asylum or who are abandoned by their husbands and such abandonment has continued for more than one year or because of total disability of their husbands, and who are unable to support their children, when such women are destitute and are mothers of children under the age of 15 years and such mothers and children reside in such counties.

SEC. 2. *Amount of allowance.*—The allowance to each of such women shall not exceed fifteen (\$15) dollars per month when she has but one child under the age of 15 years, and if she has more than one child under the age of 15 years, it shall not exceed the sum of fifteen dollars a month for the first child, and five dollars a month for each of the other children under the age of 15 years.

SEC. 3. *Juvenile court to make allowance—Conditions.*—Such allowance shall be made by the juvenile court in the counties where such court is held and elsewhere by the superior court, and only upon the following conditions: (1) The child or children for whose benefit the allowance is made must be living with the mother of such child or children; (2) when by means of such allowance the mother will be able to maintain a home for her child or children; (3) the mother must, in the judgment of the court, be a proper person morally, physically and mentally, for the bringing up of her children; (4) no person shall receive the benefit of this act who shall not have been a resident of a county in

which such application is made for at least one year next before the making of such application for such allowance.

SEC. 4. *When allowance shall cease.*—Whenever any child shall reach the age of 15 years any allowance made to the mother of such child for the benefit of such child shall cease. The court may in its discretion at any time before such child reaches the age of 15 years, discontinue or modify the allowance to any mother and for any child.

SEC. 5. *Penalty for fraud.*—Any person procuring fraudulently any allowance for a person, not entitled thereto, shall be deemed guilty of a gross misdemeanor.

SEC. 6. *Court proceedings—Payment of warrants.*—In each case where an allowance is made to any woman under the provisions of this act, an order to that effect shall be entered upon the records of the court, making such allowance. Proceedings to obtain the benefit of this act shall be instituted and maintained in the same manner as proceedings are instituted and maintained in the juvenile court and the prosecuting attorney shall render all necessary assistance to applicants under this act and shall appear in every such proceeding and through the probation officer, the charity commissioner or any person having knowledge of the facts, shall carefully investigate the merits of every application to the end that this act may be fairly administered and no person granted relief hereunder except those justly entitled thereto, and no officer of the court or county officer shall receive any fees for any service rendered in carrying out the provisions of this act. A certified copy of said order shall be filed with the county auditor of the county in which such child's mother is resident, and thereupon and thereafter and so long as such order remains in force and unmodified it shall be the duty of the county auditor each month to draw his warrant on the current expense fund of the county in favor of the mother for the amount specified in such order, which warrant shall be by the auditor delivered to the mother upon her executing duplicate receipts therefor, one to be retained by the auditor and the other to be filed by the clerk with the other records in the proceedings relating to such child or children. It shall be the duty of the county treasurer to pay such warrant out of funds in the current expense fund of the county.

SEC. 7. *Repeal.*—All acts or parts of acts in conflict with this act are hereby repealed.

Approved March 24, 1913.

The following sections from the juvenile court act relating to the method of instituting and maintaining proceedings in the juvenile court are made applicable by section 6 of the above act:

[Laws 1913, chap. 160.]

SEC. 5. *Petition.*—Any person may file with the clerk of the superior court a petition showing that there is within the county, or residing within the county, a dependent or delinquent child and praying that the superior court deal with such child as provided in this act: *Provided*, That in counties having paid probation officers, such officers shall, as far as possible, first determine if such petition is reasonably justifiable. Such petition shall be verified and shall contain a statement of facts constituting such dependency or delinquency, as defined in section 1 of this act, and the names and residence, if known to the petitioner, of the parents, guardian, or custodian of such dependent or delinquent child. There shall be no fee for filing such petitions.

SEC. 6. *Summons.*—Upon the filing of an information, or the petition, the clerk of the court shall issue a summons requiring the person having custody or control of the child, or with whom the child may be, to appear with the child

at a place and time stated in the summons, which time shall not be less than twenty-four hours after service. The parents of the child, if living, and their residence is known, or its legal guardian, if there be one or if there is neither parent nor guardian, or if his or her residence is not known, then some relative, if there be one, and his residence is known, shall be notified of the proceedings; and in any case the judge shall appoint some suitable person or association to act in behalf of the child. * * * On return of the summons or other process, or as soon thereafter as may be, the court shall proceed to hear and dispose of the case in a summary manner. * * *

In King County (juvenile court of Seattle) from June 18, 1918, when the law became effective, to December 31, 1918, 185 petitions were received, of which number 99 were granted, 61 were deferred and dismissed, and 25 were pending December 31, 1918. The average monthly allowance per family was \$20.82; total monthly allowances, \$2,012.50. Two hundred and ninety-one children in the 99 families were being benefited by the allowances. (Annual Report of Seattle Juvenile Court, 1918, p. 8.)

FORMS USED IN JUVENILE COURT OF KING COUNTY (SEATTLE).

PETITION.

In the superior court of the State of Washington for the county of King—Juvenile court.

In re the application of ————. No. ———. Petition for support of mothers.

To the honorable judge of the juvenile court:

Your petitioner, ————, a reputable person, respectfully represents to your honor that she now is and for more than one year last past has been a resident of King County, Washington; that she is the mother of ——— children under the age of 15 years now residing within said county and not inmates of any institution, public or private, and are dependent upon your petitioner or the public for maintenance and support; that the names and ages of said children are as follows:

Name.	Birthday.		Year.
	Month.	Day.	

Your petitioner represents that the father of said children is ————, that your petitioner is in destitute circumstances, owning no property whatsoever, except ————, and by reason thereof in order to maintain the home and support said children your petitioner will require aid as provided in an act relating to the support of certain destitute women who are mothers; that the statements set out in the sheet hereto attached and duly verified are true and are hereby made a part of this petition.

Wherefore your petitioner prays this honorable court to inquire into the aforesaid circumstances and investigate as to the truth of the matters herein contained in pursuance of law and upon such investigation and hearing to be duly had, such orders may be made in the premises as to this honorable court may seem meet according to equity and good conscience, and according to the statute in such case made and provided.

—————, *Petitioner.*

NOTICE.

In the superior court of the State of Washington for the county of King—Juvenile court.

In re the application of ————. No. ———. Notice.

To the honorable prosecuting attorney and board of county commissioners of King County, Washington:

Please take notice that a petition has been filed by ————, praying for an allowance under and in pursuance of an act relating to the support of certain destitute women who are mothers, which said petition will be brought on regularly for hearing in the juvenile court on the ——— day of ———, 191—, at 10 a. m. of said date, or as soon thereafter as the matter can be heard. You will therefore appear on said date, if you have any objections to granting said petition, and duly contest the same.

—————, *Judge.*

Service of the aforesaid notice is hereby accepted this ——— day of ———, 191—.

—————, *Prosecuting Attorney.*

—————, *Chairman Board of County Commissioners.*

APPLICATION AND REPORT OF INVESTIGATION.

Name of child.....	Docket number, _____ dependency record of Seattle juvenile court.
Address.....	
Date of birth.....	Investigation and report by
Name of father.....	
Name of mother.....	
Name of petitioner.....	
Address of petitioner.....	Sources of information.....
Date of petition.....	

Report of investigator and summary of case history. (Report to be typewritten.)

Surname.....	Man's first.....	Woman's first.....	Date of application....
Alias.....	Other names needed for identification.....		Social state....

Cross references.....

Date.	Res. No.	Street.	Rooms.	Floor.	F. or R.	Rent.	How long.	Sanitary condition.	Landlord or agent. Address.	Dist.

First names.	Date of birth.	Birth-place.	Occupation or school with grade.	Wages.	Left sch. at age of.	Amt. of ins.	Prem.	Cause of death.	Date of death.	Mental or physical defects and illiteracy.
Man.										
Woman's maiden name.										
Children.										
Others in family.					Kinship.	To.	Contributes to family.			

Union.	Lodge.	Benefit Society.	Other sources of income.	Amt.	Pawns.	Installments.	Debts to.	Amt.	For.
Weekly benefit.									

Race.	Length of time in—			Marriage.			Previous marriage.	Property.
	County.	State.	U. S.	Date.	Place.	By whom.		
Man.....								Do you own any?... What if any did your husband leave? ..
Woman.....								

Relatives, references.	Address.	Kinship.	Agencies and persons interested.	Relief given.

Employer.	Wages.	Record.	Church or Sunday school.
.....	Men.....
.....	Women.....
.....	Children.....

State of Washington, county of King, ss.
_____, being first duly sworn, on oath doth depose and say that the written statements under the various printed headings on the preceding page of this application were voluntarily made by this affiant and written thereon by direction of this affiant, and that the statements therein, both written and printed are true in substance and in fact.
Subscribed and sworn to before me this ____ day of _____, A. D. 191____.
By _____, Clerk.
By _____, Deputy.

Date of hearing.	Court orders and subsequent history.

FINDINGS OF COURT.

In the superior court of the State of Washington for the county of King—Juvenile court.
In re petition of _____, destitute. No. _____. Findings.
This matter coming on regularly and duly to be heard upon the petition filed herein, and it appearing to the court that the prosecuting attorney, the board of county commissioners, the aforesaid destitute woman, and all persons interested herein have had due notice of this proceeding according to the statute in such cases made and provided, and the court having jurisdiction of the subject matter and of the parties, and after hearing all the evidence adduced, and being fully advised in the premises, finds:
That _____, the petitioner, is a reputable person and has resided in King County, State of Washington, for more than one year last past; that the husband of said petitioner, _____; that petitioner is the mother of ____ child— under the age of fifteen years, as follows:

Name.	Born.		
	Month.	Day.	Year.

That by reason of the aforesaid facts petitioner is destitute, poor, and unable to properly care for said child— without assistance, but otherwise she is a proper guardian.
The court further finds that all of the allegations of the petition have been proven, and that it is for the welfare of such child— and for the best interests of the people of the State of Washington that said child— remain at home with _____ parent—, the petitioner, _____.
And the court further finds from the testimony heard in open court that the sum of _____ dollars (\$____) per month is the amount of money necessary to enable the parent, together with her earnings otherwise, to properly care for said child— at home.
Done in open court this ____ day of _____, 191____.
_____, Judge.

ORDER PROVIDING SUPPORT.

In the superior court of the State of Washington for the county of King—Juvenile court.
In re petition of _____, destitute. No. _____. Order providing support.
Upon the findings herein made and filed in the above-entitled proceedings, it is ordered that the said child— _____ be and remain ____ ward ____ of this court, and that _____ be and remain in the custody of _____, parent— of said child—, subject to the friendly visitation of the probation officers of this court, as frequently as may be directed by the court.
It is further ordered, adjudged, and decreed that the sum of _____ dollars per month be and is hereby fixed by the court as the amount of money necessary to enable the parent to properly care for said child— at home, and that the board of county commissioners of King County, State of Washington, shall make provision for the necessary moneys to meet the purposes of this order, and that upon the filing of a certified copy of said order with the county auditor of King County, said auditor is directed on the first Monday of _____, 191____, and monthly thereafter until the further order of the court, to draw his warrant on the current expense fund of the county, in favor of the

petitioner, _____, for the amount specified in this order, as her relief for the preceding month, and deliver the same to her upon her executing duplicate receipts therefor, as provided by law.

It is further adjudged that the court hereby retains jurisdiction of this cause for the purpose of making such further orders herein for the welfare of said child— and said destitute _____ as shall from time to time be found to be in accordance with equity and good conscience, and in pursuance of law.

Done in open court this _____ day of _____, 191—.

_____, Judge.

In the superior court of the State of Washington for the county of King—Juvenile court.

In re petition of _____, destitute. No. _____. Order providing support.

Upon the findings herein made and filed in the above-entitled proceedings, it is ordered that the said child— _____ be and remain _____ ward _____ of this court, and that _____ be and remain in the custody of _____, parent— of said child—, subject to the friendly visitation of the probation officers of this court, as frequently as may be directed by the court.

It is further ordered, adjudged, and decreed that the sum of _____ dollars per month be, and is hereby, fixed by the court as the amount of money necessary to enable the parent to properly care for said child— at home, and that the board of county commissioners of King County, State of Washington, shall make provision for the necessary moneys to meet the purposes of this order, and that upon the filing of a certified copy of said order with the county auditor of King County, said auditor is directed, on the first Monday of _____, 191—, and monthly thereafter until the further order of the court, to draw his warrant on the current expense fund of the county, in favor of the petitioner, _____, for the amount specified in this order, as her relief for the preceding month, and deliver the same to her upon her executing duplicate receipts therefor, as provided by law.

It is further adjudged that the court hereby retains jurisdiction of this cause for the purpose of making such further orders herein for the welfare of said child— and said destitute _____ as shall from time to time be found to be in accordance with equity and good conscience, and in pursuance of law.

Done in open court this _____ day of _____, 191—.

_____, Judge.

State of Washington, county of King, ss:

I, _____, county clerk, and by virtue of the laws of the State of Washington ex officio clerk of the superior court of the State of Washington for King County, do hereby certify that the above is a true and correct copy of the order granting pension in the above-entitled action now on file and of record in this office.

In witness whereof I have hereunto set my hand and seal of the said superior court, at my office in the city of Seattle, this _____ day of _____, A. D. 191—.

By _____, County Clerk.
_____, Deputy Clerk.

WISCONSIN.

[Laws 1913, chap. 669.]

An Act To repeal section 573f of the statutes and to create subsections 50 and 51 of section 172-67 and a new section of the statutes to be numbered 573f, relating to State aid for dependent children; and making an appropriation.

The people of the State of Wisconsin, represented in senate and assembly, do enact as follows: SECTION 1. Section 573f of the statutes is repealed.

SEC. 2. *Petition to court for aid.*—There is added to the statutes two new subsections and a new section to be numbered and to read: Section 573f. 1. The county superintendent of poor, the superintendent of poor, in any city or village, the chairman of any town or any relative or friend of any child under the age of fourteen years, who is neglected, destitute, abandoned, homeless, or in any manner dependent upon the public for support, or whose parent or parents, or person occupying the position of a parent, for any reason are unable without aid, properly to maintain, bring up or educate such child, may make an application by verified petition to the juvenile court in counties having such courts, and in other counties, to the county court or any municipal court of the county in which such child may reside, to determine the status of such child and to grant aid to it or to its parents or person occupying the position of a parent or guardian as provided in this section, or, in case the court shall find it is manifestly for the best interests of the child that it be removed from its home, then and in such case only to commit such child to the State public

school, or to place such child in the home of a relative or friend of the family, or make such other disposition of such child as it may deem wise. The petition shall state the religion or religious preference of the parents of such child.

2. *Hearing.*—On filing such petition, if the child named therein is present in court, the court may proceed forthwith to hear such matter or may continue the same. If such child be not produced the court may fix a time for hearing such matter and summon the person having the custody thereof to produce said child in court, unless for any reason the court shall consider it inadvisable so to do, in which case the court may proceed without the presence of such child. In either case the court may summon witnesses and require the attendance and assistance of the district attorney. The parents or any friend of such child may appear on its behalf and the court may order such appearance by the county superintendent of poor, the superintendent of poor in any city or village, or the chairman of any town in which such child may reside.

3. *Court to fix allowance or commit to State school.*—If the court shall find upon such hearing that such child is neglected, destitute, abandoned, homeless, or in any manner dependent upon the public for support, or that the parent or parents of such child are unable properly to maintain, bring up or educate such child, and, if in the discretion of the court, it is manifestly for the best interest of said child that it remain in the home of the parent or parents or other person occupying the position of a parent or guardian, it shall enter an order directing the county treasurer to pay, at stated periods, to such officer or person as the court may designate or to the parent, or person occupying the position of a parent or guardian of such child, and for the benefit of such child, such sum as shall be deemed sufficient, payments to continue for a limited time or until further order of the court: *Provided*, That such sum shall in no case exceed the sum of twelve dollars per month for a single child and four dollars per month for each additional child in the same family but such sum when granted may be increased temporarily by the court in case of sickness or unusual condition: *And provided further*, That the court in its discretion may order the amount of aid to be given in supplies instead of in money. If the court shall find that it is manifestly for the best interest of such child that it be removed from its home, then and in such case only, the court shall commit such child to the State public school, or may place it in the home of a relative or friend of the family, or make such other disposition of such child as it may deem wise; and if such child be placed in the home of a relative or friend, the aid granted shall be paid to such relative or friend.

4. *Court may order medical examination of child.*—If the court shall find that it is manifestly for the best interest of said child to be committed to the State public school, before entering such order it shall cause such child to be examined by the county physician, if there be one, and if there be none, by a registered practicing physician, who shall file an affidavit setting forth the facts disclosed by said examination. If such affidavit shall show such child to be of sound mind and not affected by any chronic or contagious disease and that such child has not been exposed to any contagious disease for fifteen days previous to such examination, the order committing such child may be entered. If such affidavit shall show otherwise, the order shall not be entered at that time and the court may make such temporary disposition of such child as may seem best, and order support, if necessary, as provided in the preceding section, until such time as it may be committed to the State public school.

5. *Copy of findings to be delivered with child.*—A certified copy of such findings and order and a statement of the child, names, residence and religion or religious preference of the parents and their post-office address, the name of the institution or other place in which the child has been maintained and the

length of time such maintenance has been continued, with a copy of the certificate of the physician, shall be delivered with the child at the State public school.

6. The proceedings provided for by this section may include two or more children, all of whom may be named in the same petition, order and certificate.

7. *Person having custody of child to make report.*—Any person designated by the court to administer any aid granted under the provisions of this section shall keep a true and accurate account thereof and shall, once each month, make report thereof to the court ordering such aid and also to the county clerk. Such report shall be made upon blanks furnished by the board of control and shall contain such data as the board of control may determine and such further information as the judge may require.

8. *Court to report to board of control.*—The court having jurisdiction under this section to receive applications for aid shall once each month cause to be reported to the board of control all of the applications received during the preceding month, and shall cause to be set forth in such report the disposition of each such application. Such reports shall be made upon blanks furnished by the board of control. The board of control may, from time to time, demand such information as it desires relative to matters coming within the purview of this section.

9. *County board may appropriate funds.*—The county board of supervisors may annually appropriate out of the funds in the county treasury such an amount as it shall deem sufficient to carry out the provisions of this section. Money so appropriated shall be placed in a special fund and shall be paid out by the county treasurer upon order of the court having jurisdiction to receive applications and grant aid under this section.

10. *County treasurer to report to board of control—State aid.*—On the first day of January of each year the county treasurer shall certify under oath, in duplicate, to the secretary of state and the State board of control the amount paid out by such county during the preceding year for aid under this section, and if the board of control shall approve the same and shall cause its approval to be indorsed by the president and secretary of said board on the certificate received by the secretary of state, the secretary of state shall credit one-half of the amount so certified to be due such county on the State taxes next due therefrom, and the State treasurer shall credit such county with said one-half of such amount in his annual settlement with said county for taxes due the State: *Provided*, That the amount paid by the State to any county in any one year shall not exceed a sum equal to one dollar for each thirty inhabitants thereof: *Provided further*, That if the total amount paid by all the counties under this act as certified by the county treasurers shall exceed the sum appropriated by subsection 51 of section 172—67, the secretary of state and the State treasurer shall prorate the said sum among the various counties according to the amount paid out.

11. *Board of control to investigate.*—The board of control shall make a general survey and investigation of the question of aid to mothers and dependent children in this State and shall report its findings and recommendations to the next legislature not later than March 1, 1915.

(Section 172—67) 50. There is appropriated from any moneys in the general fund not otherwise appropriated, the sum of five thousand dollars or as much thereof as may be necessary to investigate the question of aid to mothers and dependent children as required in subsection 11 of section 573f.

51. *Appropriation.*—There is annually appropriated out of any moneys in the general fund not otherwise appropriated, a sum not to exceed seventy-five

thousand dollars as State aid to dependent children to carry into effect the provisions of section 573f, said sum to be offset in the manner provided in subsection 10 of section 573f.

Sec. 3. This act shall take effect and be in force from and after its passage and publication.

Approved July 24, 1913. Published July 26, 1913.

OPERATION OF LAW.

In Milwaukee County, prior to the passage of this act, aid to poor mothers for the support of dependent children in their own homes was being given out of a special fund of \$5,000 set aside by the county board in March, 1912, such fund "to be used and drawn upon by the trustees of the Milwaukee County Home of Dependent Children in such cases of dependent and neglected children pending in the juvenile court of Milwaukee County where said board, from the evidence there taken and upon the advice of the presiding judge of such court, decides and determines that it is for the best interests of the family to give such family financial assistance instead of detaining such child or children in said Milwaukee County Home for Dependent Children." The amount paid to the mothers varied from \$1.50 to \$8 a week. During the month of October, 1912, 43 women with 209 children received aid at a cost for the month of \$490.

Under the new law up to December 31, 1913, fifteen counties (Douglas, Iowa, Lincoln, Marathon, Milwaukee, Polk, Rusk, St. Croix, Shawano, Taylor, Trempealeau, Vernon, Washburn, Washington, and Wood) had appropriated for mothers' pensions a total of \$37,150. Of this amount Milwaukee County appropriated \$25,000. Payment of pensions had, however, been made in only five of these counties (Iowa, Marathon, Milwaukee, Shawano, and Washington), totaling \$9,632 up to December 31, 1913. One hundred and eighty-seven families (667 children) were being aided in these five counties, 162 of them (590 children) in Milwaukee County.

FORMS ADOPTED BY STATE BOARD OF CONTROL.

PETITION TO THE COURT TO DETERMINE THE STATUS OF CHILDREN ALLEGED TO BE DEPENDENT OR NEGLECTED.

State of Wisconsin, county of _____, ss. _____ court of _____.

To _____, judge of the _____ court of _____. In the matter of _____, alleged dependent child—.

Your petitioner— respectfully represent— to the court that _____; that in _____ opinion said child— dependent on the public for support; that _____ under the age of fourteen years; and that _____ ha— no parents against whom support can be enforced as provided by law.

Your petitioner— further represents that the following is a correct statement of the facts so far as _____ able to ascertain them.

1. Name of father (give name in full, avoid giving initials only), _____; city or village, _____. 2. P. O. address of father, _____; street and number, _____. R. F. D. _____. 3. Is father dead? _____. 4. Name of mother (give name in full, avoid giving initials only), _____; city or village, _____. 5. P. O. address of mother, _____; street and number, _____. R. F. D. _____. 6. Is mother dead? _____. 7. Has father abandoned child—? _____. 8. Has mother abandoned child—? _____. 9. Occupation of father? _____. 10. Occupation of mother? _____. 11. Religious belief of father? _____. 12. Of mother? _____.

Your petitioner— therefore pray— this court to examine into this case and to determine the status of such child—, and should such child— be found neglected, destitute, abandoned, homeless, or in any manner dependent upon the public for support, or if _____ parent or parents are unable, without aid, to properly maintain, bring up, or educate such child—, that an order be entered in this court granting such relief or making such disposition of the case as the court deems proper.

Dated, _____, 19--.

(Signed) _____ (give official title).
(Signed) _____ (give official title).

NOTE.—Crippled children will be received at the State public school if they are able to go up and down stairs alone and wash and dress themselves.

State of Wisconsin, county of _____, ss. _____ court of _____.

To _____, judge of the _____ court of _____.

The undersigned, _____, _____ of the within-named child—, hereby respectfully request— that an order be entered in this court finding such child— to be

dependent upon the public for support, and that the court shall determine the status of said child— and make such disposition of the case as the court may deem proper.

_____.
_____.

Dated, _____, 19____.
In presence of—

_____.
_____.

MONTHLY REPORT OF PARENT, GUARDIAN, OR OTHER PERSON RECEIVING AID FOR THE CARE AND SUPPORT OF DEPENDENT CHILDREN UNDER PROVISIONS OF CHAPTER 669, LAWS OF 1913.

NOTE.—Read these instructions carefully before attempting to make out this report. This report is required by law.

EXTRACT FROM LAW.

Section 573f-7. (Chapter 669, Laws of 1913.) Any person designated by the court to administer any aid granted under the provisions of this section shall keep a true and accurate account thereof and shall, once each month, make report thereof to the court ordering such aid and also to the county clerk. Such report shall be made upon blanks furnished by the board of control, and shall contain such data as the board of control may determine and such further information as the judge may require.

On the first day of each month all persons designated by the court to administer any aid granted under the provisions of the above-named law must fill out this report blank. One copy should be sent to the county clerk of the county in which such person resides, and the other to the judge of the court in which this aid was granted. Your report should never reach the county clerk or the judge of the court where the aid was granted later than the 5th day of each month.

This report should include all the money received and paid out by all members of the family which reside at home. It should include the earnings of the father, if any, the earnings of the mother, if any, and the earnings of the children, providing there should be any children residing at home who are of sufficient age to earn money. Always give the exact amount received from the county treasurer as aid. If any money is received as gifts or aid from other charitable sources include this also. Include all money received, and give source from which it came. Do not include any money that may have been earned during the month but not received by you during the month. If you or some member of the family has earned some money that has not been received do not include same in your report until it is actually paid to you. This report covers the entire month, from the morning of the first day up to and including the last day of the month.

1. Date, _____, 19____. 2. Report for the month of _____, 19____. 3. Name of person making this report, _____ 4. P. O. address of person making this report: City or village, _____; street and number, _____; R. F. D. _____.

5. In the following space give the number of days each child has attended school during the month, the number of times each child has attended church during the month, the health of each child during the month, and such other facts as are called for.

Names of all children who reside at home.	Age, nearest birthday.	Number of days child has attended school during the month.	Number of times child has attended church during the month.	Health of child during the month.

6. Money received during the month (see instructions above).	Amount received.
(a) How much money did you have left over at the beginning of the month?.....
(b) How much did you receive during the month from the county treasurer as aid?.....
(c) What was the total amount received during the month as wages of the father?.....
(d) What was the total amount received during the month as earnings of the mother?.....
(e) Was any money received during the month which was earned by the children? If so, how much?.....
(f) Give here a list of all other money received from every source and tell where it came from and what it was for:	
Total amount of money to account for.....

7. In the following space give a detailed list of all money paid out during the month. (See instructions on the other side of this sheet.)

Date.	To whom paid.	In payment of—	Amount.
Total amount of money paid out during the month.....			
Balance still in your possession at the end of the month.....			
Total.....			
(This total should equal the total at the bottom of the preceding page.)			

8. Were any members of the family, including the father and the mother, severely injured or afflicted with any severe illness during the past month? _____. If so, describe fully. _____.

NOTE.—In the case of a death, birth, or marriage in the family, the fact should be reported in the above space.

9. This space is left for reporting to the judge who granted you the aid any special information which he may require. _____.

Date, ———, 19—.

DECLARATION.

I solemnly declare that the foregoing is a complete and true statement of all money received and paid out by me during the past month and that all questions are correctly answered, to the best of my knowledge and belief.

(Signed) _____

In presence of—

_____, witness.

_____, witness.

(Not members of same family as person making report.)

**REPORT OF THE COURT TO THE STATE BOARD OF CONTROL OF WISCONSIN IN THE
MATTER OF DEPENDENT CHILDREN.**

NOTE.—This report is required by authority of chapter 669, Laws of 1913.

NOTE.—This report is required by authority of chapter 333, Laws of 1918.

Whenever a petition is received by the court to determine the status of children alleged to be dependent or neglected, a report of the action and findings of the court should be made to the State board of control of Wisconsin. This report should be made in all cases whether the court grants the aid to the children or not.

In case the court shall find it manifestly for the best interests of the children that they be committed to the State public school, then this blank should be made out in duplicate and one copy mailed to the office of the State board of control of Wisconsin and the other sent with the commitment papers to the superintendent of the State public school, Sparta, Wis.

Officials making out this blank should answer all questions as completely as possible.

County of _____. Date petition was received by the court _____, 19____. The petition was signed by whom _____ (give official capacity); _____ (give official capacity).

Name of child.	Date of birth.			Place of birth.	
	Month.	Day.	Year.		
					<p>If born in Wisconsin, give county.</p> <p>If born in United States, give State.</p> <p>If foreign-born, give country.</p>

1. Name of father (give name in full, avoid giving initials only) _____; city or village - _____. 2. P. O. address of father—street and number _____; R. F. D. _____. 3. Is father dead? _____. 4. Name of mother (give name in full, avoid giving initials only) _____; city or village _____. 5. P. O. address of mother—street and number _____; R. F. D. _____. 6. Is mother dead? _____. 7. Has father abandoned child—? _____. 8. Has mother abandoned child—? _____. 9. Occupation of father _____. 10. Occupation of mother _____. 11. Religious belief of father _____. 12. Of mother _____. 13. Is father intemperate? _____. 14. Is mother intemperate? _____. 15. Has father ever been under arrest for violation of the law? _____. 16. Has he ever been committed to the county jail, city workhouse, State reformatory, State prison, or any other penal institutions in this or any other State, as far as can be ascertained? _____. 17. If so, when? _____; length of time served _____; crime convicted of _____; in what institution _____. 18. Has mother ever been under arrest for violation of the law? _____. 19. Has mother ever been committed to the county jail, city workhouse, State prison, or any other penal institu-

tions in this or any other State, as far as can be ascertained? _____. 20. If so, when? _____; length of time served _____; crime convicted of _____; in what institution _____. 21. Character of father _____. 22. Character of mother _____. 23. Birthplace of father _____ (if born in Wisconsin, give county; if born in United States, give State; if foreign born, give country). 24. Birthplace of mother _____. 25. If foreign born, have both parents been naturalized? _____. 26. How long has father resided in Wisconsin? _____. 27. How long has mother resided in Wisconsin? _____. 28. Age of father (nearest birthday) _____. 29. Age of mother (nearest birthday) _____. 30. Nationality or descent of father _____. 31. Nationality or descent of mother _____. 32. Health of father _____. 33. Health of mother _____. 34. Is father employed at present? _____. 35. If not, why not? _____. 36. When was he last employed and with whom? _____. 37. What are his present wages (state whether per month, per week, or per day)? _____. 38. Is father addicted to the use of drugs? _____. 39. Is mother addicted to the use of drugs? _____. 40. Has either parent ever been adjudged insane? _____. If so, which one? _____. 41. Is either parent feeble-minded or epileptic? _____. 42. Was either parent ever an inmate of any poorhouse, almshouse, or any other institution for paupers? _____. 43. If so, when? _____. Where? _____. 44. Has either parent ever been an inmate of any other penal or charitable institution not enumerated above? _____. 45. If so, when? _____. Where? _____. 46. Has child—ever been christened? _____. 47. If so, in what faith? _____. 48. Has child ever been under arrest for violation of the law? _____. If so, give particulars _____. 49. Has child—ever been maintained by charity? _____. 50. Has child—ever been an inmate of any charitable, reformatory, or penal institution? _____. 51. If so, when? _____. Name and address of institution _____. 52. What diseases of childhood has child—had? _____. 53. What is the legal residence of the child—? _____. 54. Give the following information in regard to all the other children of this family not included in the application for relief:

Name.	Sex.	Age nearest birthday.	Living (yes or no).	What are they doing at present?

DISPOSITION OF CASE.

A. If committed to the State public school: 1. Date of commitment _____, 19____. 2. Names of children committed: _____. B. If an order was entered directing the county treasurer to make certain payments as aid in accordance with the provisions of chapter 669, Laws of 1913: 1. Date the order was entered _____, 19____. 2. Amount to be paid as aid each month, \$_____. 3. Person to whom money is to be paid: Name _____; P. O. address _____; relationship to child _____. 4. Date when payments are to begin _____, 19____. 5. Length of time payments are to continue _____. C. If no aid was granted, what were the reasons assigned by the court for denying such aid? (State briefly the findings of the court.) _____. Dated, _____, 19____. (Signed) _____, Judge.

DANISH LAW REGARDING ASSISTANCE TO CHILDREN OF WIDOWS, 1913.

[Law regarding assistance to children of widows (Lov om Understøttelse til Børn af Enker. Lov Nr. 124, 29 April, 1913).]

SECTION 1. Widows who are considered indigent shall, provided they are entitled to support in cases of continuous need, have the right to a public contribution toward the support and education of their legitimate children or children adopted under marriage, without the disabilities attaching to poor relief.¹

A widow is considered indigent whose property does not exceed 4,000 kr. [\$1,072], with the addition of 500 kr. [\$134] for each child under 14 years, and whose income does not exceed two-thirds of the amount exempt from state taxation in the commune concerned, pursuant to Law No. 144 of June 8, 1912, section 8, paragraph 1, with the addition of 100 kr. [\$26.80] for each child under 14 years of age. In exceptional circumstances the local board² may, at its discretion, decide whether such a widow shall be deemed indigent and, if so, whether she shall have the full assistance hereinafter mentioned, or whether this can be reduced to one-half.

The assistance amounts to—

100 kr. [\$26.80] yearly until the child is 2 years.

80 kr. [\$21.44] yearly until the child is 12 years.

60 kr. [\$16.08] yearly until the child is 14 years.

The assistance ceases if the mother remarries; if she leads a life which gives public offense (habitual drunkenness, immorality, or like offenses); if she receives help from the poor relief (*Fattigvæsen*) or from a relief fund (*Hjælpekasse*) which has a grant from the communal funds, or from the communal section of the Copenhagen relief society. The assistance is likewise withdrawn if her economic condition essentially improves by an increase in her property or income not originating from her own or her children's work.

Assistance to the mother under sections 44, 61, and 63³ of the poor law does not have this result, neither does aid from the relief funds or the communal section of the Copenhagen relief society in case of sickness of the mother or children.

The contribution may in exceptional cases be extended to the 18th year.

SEC. 2. The subsistence-allowance (*Underholdsbidrag*) is payable to the widow concerned quarterly, eventually monthly, in advance; the first time for the quarter or the month which follows the death of the husband, and the last time for the quarter or month in which the aid ceases.

¹ Loss of suffrage and certain other rights.

² *Kommunal bestyrelse*, the governing board of each commune.

³ Money expended by the general community for the education, maintenance, and support of the blind, deaf, dumb, feeble-minded, and idiots is not classed as poor relief. Certain kinds of medical relief are also exempt from the civil disabilities attaching to poor relief.

SEC. 3. If a child is under the care of the poor relief or has been taken under the care of a council of guardians¹ (Law No. 72, April 14, 1905) it does not come within the provisions of this law.

SEC. 4. Half of the expense of the subsistence-allowance herein provided for is borne by the State, the remainder by the commune in which the widow concerned has her permanent abode. Country districts grouped with towns with respect to poor relief are referred to the said town.

SEC. 5. In regard to the expense which a commune, in accordance with the rules in section 4, incurs in the capacity of residence commune, it can (provided the widow in question is entitled to support elsewhere) claim reimbursement of three-fourths of the amount from the said commune owing support. If there is no commune which can be regarded as under liability for support, said expense shall be made good out of the public funds which in accordance with existing law are chargeable in place of the commune owing support.

SEC. 6. The acquirement by a widow of right of support in the commune of residence is regarded as pending for the period in which a subsistence-allowance (*Underholdsbidrag*) is granted under this law from the public funds to the children concerned.

SEC. 7. At the same time that the communal authorities, in accordance with section 32 of Law No. 85 of May 15, 1903, transmit to the minister of the interior and the county council, respectively,² the statement of certain expenditures therein mentioned (a, b, c, and d) there shall be forwarded a statement of what the commune has expended under the present law (sections 4 and 5).

At the apportionment of State aid pursuant to sections 31, 32, and 33 of the first-mentioned law this amount shall be included in the account.

SEC. 8. The management of all matters pertaining to a subsistence-allowance (*Underholdsbidrag*) in accordance with the provisions of this law rests upon the communal authority of the commune in which the widow concerned has her permanent abode.

SEC. 9. The communal authority which receives a request for a subsistence-allowance (*Underholdsbidrag*) must carefully investigate the economic conditions of the home in question to determine the need and other circumstances in order to decide what aid in each particular case shall be granted and how it shall be paid out. It is furthermore the duty of this authority to exercise supervision in order that the subsistence-allowance shall be expended in a proper manner for the benefit of the children concerned. It can determine that food or clothes shall be purchased with the subsistence money for the child.

In case a particular or general regulation of the communal authority with respect to the use of the aid is not complied with, the superior authority³ is to be informed of the matter.

If it shall be deemed desirable, private societies may cooperate in the work of investigation and supervision.

SEC. 10. The payment of the subsistence-allowance (see sec. 2) shall be made in advance out of the treasury of the commune of residence concerned, after which the expenditure of the communal board is to be reported to the county for part repayment pursuant to section 4 of this act. With respect to the eventual reimbursement from the commune liable for support (sec. 5) the regulations in section 48 of Law No. 67 of Apr. 9, 1891, apply.

¹ The *Vaergeraad*, a special council of guardians in each commune which looks after the education and training of neglected and delinquent children.

² In rural communes the *Kommunal bestyrelsen* are under the supervision of their *Amtsraad* or county council; in provincial towns under the minister of the interior.

³ See footnote ²

The county is to report to the minister of the interior as soon as possible after the end of the fiscal year what amount in each commune has been expended for subsistence-allowances in accordance with the present law.

SEC. 11. Complaints in regard to the decisions of the communal authorities with respect to the provisions of this law shall not be made before the courts but before the superior authority,¹ whose decision if the complaint is not sustained is final, but in the contrary case, appeal may be taken by the communal authority to the minister of the interior.

If it comes to the knowledge of the superior authorities through the inspection of the accounts or otherwise that there is being granted aid (*Understøttelse*) to unqualified persons or the provisions of the law in other respects are not being complied with, decision in the case rests likewise upon them, which decisions may, however, be referred to the minister of the interior.

In the case of disputes between the communes themselves with respect to the obligations imposed upon them in accordance with this law, the chairman of the county council (*Amtmand*) of the superior magistracy to which the commune belongs, against which the obligation is urged, has the power of decision; and if the dispute relates to Copenhagen, the minister of the interior.

The decisions of the chairmen of the county councils (*Amtmaendene*) may be referred to the minister of the interior.

SEC. 12. The minister of the interior shall prepare detailed instructions respecting the drawing up of the forms for requests for subsistence-allowance (*Underholdsbidrag*) as well as regarding the accounts necessary to be kept, examination of accounts and so forth.

SEC. 13. The Government is empowered by royal proclamation to let this act come into force in the Faroes with such modifications as the special conditions in these islands may make expedient.

SEC. 14. This act takes effect on the 1st of January, 1914. Widows who at that time are receiving aid from the poor relief (*Fattigvaesen*), relief funds (*Hjaelpkasse*), or the communal section of the Copenhagen relief society, shall not on that account be debarred from coming under the provisions of this act.

¹ The *Amtraad* or county council. The *Amtmand*, the chairman of this council, a State appointed, paid official, is the representative of the *Amtraad*.

NEW ZEALAND WIDOWS' PENSION ACT, 1911.

ANALYSIS.

- | Title. | |
|---|--|
| 1. Short title. | 18. Payments to person other than pensioner in pursuance of warrant of commissioner. |
| 2. Interpretation. | 19. Receipt duly given to be evidence of payment. |
| 3. Pensions to widows. | 20. Forfeiture of pension. |
| 4. Qualifications of applicant for pension. | 21. Amount of pension not affected by death of child within pension year. |
| 5. Children to whom act does not apply. | 22. Suspension of payment in certain cases. |
| 6. Restrictions on grant of pensions. | 23. Cancellation or variation of pension certificates by magistrate. |
| 7. Rates of pension. | 24. Recovery of amount of pension paid in excess. |
| 8. "Annual income" defined. | 25. Offences punishable by imprisonment. |
| 9. Rate of pension not to vary during pension year. | 26. Penalty for receiving payment for procuring pension for any person. |
| 10. Forfeiture of right to pension. | 27. Pensions to be inalienable. |
| 11. Pension to be paid by monthly instalments. | 28. Statutory declarations, how to be made. |
| 12. Pension claims. | 29. Exemptions from stamp duty. |
| 13. Applications for renewal to be made within first month of pension year. | 30. Minister of finance to provide for payment out of consolidated fund to provide for pensions. |
| 14. Magistrate to hear and determine pension claims. | 31. Administration expenses. |
| 15. Registrar to issue pension certificates. | 32. Application of act restricted. |
| 16. Instalments of pensions to be paid through money-order office. | 33. Regulations. |
| 17. Payments to be made within one month of due date, on production of pension certificate. | |

[1911, No. 16.]

An Act To make provision for the grant of pensions to widows having young children dependent on them.¹ (28th October, 1911.)

Be it enacted by the General Assembly of New Zealand in Parliament assembled, and by the authority of the same, as follows:

1. This act may be cited as the Widows' Pensions Act, 1911, and shall come into operation on the first day of January, nineteen hundred and twelve.

2. In this act, unless a contrary intention appears—

"Commissioner" means the commissioner under the Old-age Pension Act, 1908:

"Registrar" means a registrar of old-age pensions under the said act:

"District" means a district constituted by the Governor for the purposes of and under the authority of the said act:

"Pension year" means in respect of an original pension certificate a period of twelve months commencing on the first day of the month in which the pension claim is made on which that certificate is issued, and in respect of a renewed pension certificate means a period of twelve months commencing on the corresponding day of any subsequent year:

"Pension certificate" means a certificate granted by a magistrate for the payment of a pension under this act:

¹ For legislative history of this act see New Zealand, Parliamentary debates, 1911, v. 156: 648-51, 692-3, 697, 815-9, 867-9, 938-42.

"Original pension certificate" means any pension certificate other than a renewed pension certificate:

"Renewed pension certificate" means a pension certificate for the continuance of a pension already granted under this act, whether with or without any alteration in the amount thereof.

3. Subject to the provisions of this act, every widow who at the commencement of any pension year conforms to the requirements hereinafter set forth shall be entitled to receive during that year a pension at the rate hereinafter provided.

4. No widow shall be entitled to a pension unless she is resident in New Zealand and has a child or children to whom this act is applicable.

5. This act shall not apply to—

(a) Any child over the age of fourteen years:

(b) Any illegitimate child, unless legitimated by the subsequent marriage of the parents:

(c) Any adopted child:

(d) Any child born out of New Zealand:

(e) Any child born in New Zealand unless its mother was resident in New Zealand for not less than six months before its birth.

6. No widow shall be entitled to a pension unless the magistrate to whom the application for a pension certificate is made is satisfied that she is of sober habits and of good moral character, and that the pension will be properly used for the support of her children.

7. (1) A pension under this act shall be payable at the following rates, subject to the deduction hereinafter provided:

(a) If the widow has one child to whom this act applies the pension shall amount to twelve pounds [\$58.44] a year:

(b) If she has two such children the pension shall be eighteen pounds [\$87.66] a year:

(c) If she has three such children, the pension shall be twenty-four pounds [\$116.88] a year:

(d) If she has more than three such children the pension shall be thirty pounds [\$146.10] a year.

(2) Each of the foregoing rates of pension shall be subject to a deduction of one pound [\$4.87] for every pound by which the annual income, as hereinafter defined, of the widow and her children as aforesaid exceeds the sum of thirty pounds [\$146.10].

8. (1) The term "annual income" as used in this act means the aggregate income from all sources (other than personal earnings and a pension under this act, not exceeding together the sum of one hundred pounds [\$487]) for the year ending one month before the commencement of the pension year.

(2) If a widow or any of her children to whom this act applies is the owner of any property which produces no income, or which produces an income less than five per centum of the value of that property, the widow or child shall for the purposes of this act be deemed to be in receipt from that property of an annual income equal to five per centum of the value thereof.

(3) If a widow or any of her children to whom this act applies is in receipt of any income which is partly derived from property and is partly personal earnings in respect of that property, the magistrate to whom the application for a pension certificate is made shall apportion that income in such manner as he thinks just, and the part thereof which is so apportioned as personal earnings shall not be computed as income for the purposes of this act.

9. Except as hereinafter provided, the rate of each year's pension shall not vary during the year.

10. No widow shall be entitled to a pension if she has at any time, whether before or after the coming into operation of this act, deprived herself directly or indirectly of property or income in order to qualify for a pension, or in order to increase the pension to which she would otherwise be entitled.

11. (1) Every pension shall be granted for and in respect of a single pension year, and shall commence at the beginning of that year.

(2) Every pension shall be payable by twelve equal monthly installments on the first day of each month, the first of such installments being payable on the first day of the second month of the pension year.

(3) The pension for each year shall be payable pursuant to a pension certificate issued in the prescribed form in respect of that year and not otherwise.

12. (1) Every application for a pension certificate (in this act termed a pension claim) shall be made in writing in the prescribed form and manner, and shall be delivered to the registrar of the district wherein the claimant resides, or to the nearest postmaster, who shall forthwith forward the same to the registrar.

(2) The date of such delivery of the claim to the registrar or postmaster shall be deemed to be the date of the making of the application.

(3) The claimant shall by statutory declaration affirm that the contents of the pension claim are true and correct in every material point.

(4) The pension claim shall state on the face thereof whether it is an application for an original pension certificate or for a renewed pension certificate.

13. If an application for a renewed pension certificate is made later than the end of the first month of the pension year, the installments of that year's pension for each complete month which has elapsed before the making of the application shall be deemed to be forfeited, and shall be excluded accordingly from the renewed pension certificate, unless the magistrate hearing the application is satisfied that the delay arose from unavoidable circumstances or is otherwise fit to be excused.

14. (1) Every pension claim shall be heard and determined by a magistrate exercising the jurisdiction of the magistrate's court in the district in which the claim is made; and the decision of the magistrate shall be final and conclusive.

(2) The Governor may, by order in council, make regulations governing the procedure in the hearing and determination of such claims.

15. So soon as any pension claim is established to the satisfaction of the magistrate hearing the same he shall, in the prescribed manner and form, certify the same to the registrar, who shall thereupon, in the prescribed manner and form, issue to the claimant an original or renewed pension certificate, as the case may be.

16. (1) Each monthly installment of a pension shall be payable at the post-office money-order office named in the pension certificate.

(2) On application in the prescribed manner, the office at which installments are so payable may be changed from time to time.

17. (1) Subject to the provisions of this act, each monthly installment shall be payable at any time within one month after its due date on the personal application of the pensioner and the production of her pension certificate at the proper post office money-order office.

(2) Any installment payable in respect of any month which has expired before the issue of the pension certificate shall be payable at the same time as the first installment which becomes due after the issue of the certificate.

(3) The commissioner may at any time, in his discretion, waive strict compliance with the requirements of this section in any case in which those re-

quirements have not been complied with by reason of the pensioner's illness, absence, or other sufficient cause, notwithstanding that the above-mentioned period of payment has already expired.

(4) In default of strict compliance with the requirements of this section, but subject to any such waiver as aforesaid, every installment in respect of which such default has been made shall be deemed to be forfeited.

18. (1) On production to the postmaster of a warrant in the prescribed form, signed by the commissioner, the installments of a pension or any of them may be paid to any clergyman, justice of the peace, or other reputable person named in the warrant for the benefit of the pensioner or her children.

(2) Such a warrant may be issued by the commissioner, either with or without the consent of the pensioner, whenever he is satisfied that it is expedient so to do, having regard to the age, infirmity, or improvidence of the pensioner, or any other special circumstances.

(3) The person to whom installments are so paid in pursuance of any such warrant shall hold the same in trust to expend them in such manner as he thinks fit for the benefit of the pensioner or of her children, but the pensioner shall have no control or power of disposition over any moneys so received in trust.

(4) Any warrant issued under this section may be at any time revoked by the commissioner.

(5) While any such warrant remains in force no installment to which it relates shall be payable except to the person named in the warrant in that behalf.

19. The written receipt of any person for any installment paid to that person on the production of a pension certificate or of a warrant under the last preceding section shall be conclusive evidence of due payment of that installment to the person entitled thereto, notwithstanding any mistake as to the identity of the recipient or as to any other matter.

20. If at any time during a pension year the pensioner dies or marries, or ceases to reside in New Zealand, her pension shall cease, and no installment thereof which is not then already due shall be payable.

21. The right to a pension or the amount of a pension shall not be affected during any pension year by reason merely of the fact that any child of the pensioner has during that year attained the age of fourteen years, or by reason merely of the death of any child of the pensioner.

22. If at any time the commissioner has reason to believe that any pension certificate has been improperly obtained, or has been granted in error, he may cause the payment of all installments of that pension to be suspended pending an inquiry before a magistrate under the next succeeding section.

23. (1) The magistrate may at any time, on the application of the commissioner, review any pension certificate, whether still current or already expired, on the ground of any alleged error in the grant thereof, and may either cancel the same or vary the same by diminishing the amount thereof in such manner as he thinks fit, having regard to the provisions of this act.

(2) Any order so made by the magistrate shall take effect retrospectively as from the commencement of the pension year in respect of which it is made.

24. When by reason of the cancellation or variation of a pension certificate, or by reason of determination during any pension year of the right to receive further payments of that pension, any pensioner has received any payments in excess of the amount to which she was lawfully entitled, all sums so received by her shall constitute a debt due by her to the Crown, and shall be recoverable accordingly in any court of competent jurisdiction, or may be deducted from any moneys thereafter becoming payable to her under this act.

25. Every person is liable on summary conviction to three months' imprisonment who—

- (a) By means of any willfully false statement obtains or attempts to obtain a pension under this act not being lawfully entitled thereto, or a pension of a larger amount than that person is lawfully entitled to; or
- (b) Knowingly obtains or attempts to obtain payment of any installment of a pension which has ceased to be payable; or
- (c) By means of personation or any other fraudulent device obtains or attempts to obtain payment of any installment of a pension; or
- (d) Willfully aids, abets, counsels, procures, or incites any person to obtain or attempt to obtain without right a pension or the payment of any installment of a pension.

26. Every person commits an offence and is liable on summary conviction to a fine of fifty pounds who receives, demands, or offers or agrees to receive any money or other reward or remuneration in consideration of procuring or attempting to procure for any other person a pension under this act, but nothing in this section shall extend or apply to any proper payment for legal services rendered by any solicitor of the supreme court.

27. A pension under this act shall be inalienable, whether by way of assignment, charge, execution, bankruptcy, or otherwise howsoever.

28. A statutory declaration required or authorized by this act or by any regulations made thereunder may be made before any justice of the peace, solicitor of the supreme court, registrar, postmaster, or constable.

29. No stamp duty shall be payable on any statutory declaration, receipt, or other document made or given for the purposes of this act.

30. The minister of finance shall from time to time, without further appropriation than this act, pay out of the consolidated fund into the post office account by way of imprest whatever moneys are necessary for the payment of pensions under this act.

31. All expenses incurred in the administration of this act other than the payment of pensions shall be payable out of moneys to be from time to time appropriated by Parliament.

32. This act, in so far as it applies to the grant of pensions, shall not apply to—

- (a) Aliens; nor to
- (b) Chinese or other Asiatics, whether naturalized or not, and whether British subjects by birth or not.

33. (1) The Governor in council may from time to time make regulations under this act relating to any of the following purposes or matters:

- (a) The procedure in all judicial proceedings (other than criminal proceedings) under this act:
- (b) The recording or registration of pension claims, pension certificates, and all other matters and proceedings in relation to pensions under this act:
- (c) The duties of the commissioner, registrars, postmasters, and magistrates under this act:
- (d) The transfer of pension certificates from the register of one district to the register of another district:
- (e) The issue of duplicate pension certificates in lieu of certificates lost or destroyed:
- (f) The forms of instruments required or authorized by this act:
- (g) The mode of payment of pensions:
- (h) All other matters in respect of which regulations are contemplated or required by this act, or which the governor deems necessary or admissible for the proper administration of this act.

(2) Such regulations shall be laid on the table of the House of Representatives within ten days after the commencement of each session, and referred to such sessional committee for report as the House directs.

WIDOWS' PENSIONS AMENDMENT ACT, 1912.¹

ANALYSIS.

Title.	
1. Short title.	6. "Annual income" defined. Repeal.
2. Definition of "widow" extended.	7. Review of pension-certificate on ground of altered circumstances of pensioner.
3. Section 2 of principal act amended.	8. On death of widow, guardian may receive pension on behalf of children.
4. Section 5 of principal act modified.	
5. Section 5 of principal act amended.	

An Act To amend the Widows' Pensions Act, 1911. (7th November, 1912.)

Be it enacted by the General Assembly of New Zealand in Parliament assembled, and by the authority of the same, as follows:

1. This act may be cited as the Widows' Pensions Amendment Act, 1912, and shall form part of and be read together with the Widows' Pensions Act, 1911 (hereinafter referred to as the principal act).

2. In the principal act and this act, unless a contrary intention appears, the expression "widow" shall be deemed to extend to and include any woman whose husband is detained in an institution under the Mental Defectives Act, 1911, if the magistrate to whom application for a pension certificate under the principal act is made finds, upon the certificate of the medical superintendent of the institution, that the husband is incurable or likely to be incurable for the period of at least twelve months after the granting of a pension certificate.²

3. Section two of the principal act is hereby amended by omitting from the definition of "pension year" the words "made on which that certificate is issued," and substituting the word "established."

4. (1) Notwithstanding anything in section five of the principal act, that act shall apply to—

(a) Any child born out of New Zealand if its mother was only temporarily absent from New Zealand at the time of its birth; and

(b) Any child born out of New Zealand if its mother has continuously resided in New Zealand for not less than ten years immediately preceding the date of an application for a pension under the principal act:

Provided, That continuous residence in New Zealand shall not be deemed to have been interrupted by occasional absences therefrom if she establishes the fact that during such absences her family or home was in New Zealand.

(2) Section five of the principal act is hereby amended by repealing paragraph (c) thereof.

5. Section five of the principal act is hereby amended by omitting from paragraph (b) the words "unless legitimated by the subsequent marriage of the parents," and substituting the words "unless after the birth of the child its parents have intermarried."

6. (1) The term "annual income" as used in the principal act and this act means all moneys, valuable consideration, or profits derived or received from

¹ Passed to meet certain difficulties and inequalities that had arisen in the operation of the law of 1911. For legislative history of this amendment, see New Zealand. Parliamentary debates, 1912, v. 158: 148, 157-8, 160; v. 159: 168; v. 160: 549; v. 161: 62-8, 171-2, 174-5, 212, 217, 223-4, 231, 529-32, 636, 662, 696.

² Up to March 31, 1913, the benefits of the pension had been extended under this amendment to 28 wives of inmates of insane asylums, who were the mothers of young children.

any source for the year immediately preceding the pension year by a widow and any of her children to whom the principal act as amended by this act applies, for their own use or benefit, and includes the constructive income computed in accordance with subsection three of this section, but does not include any pension payable under the principal act, nor any relief received from any charitable institution, nor any capital moneys belonging to a widow or any of her children to whom the principal act as amended by this act applies withdrawn from a bank and expended for the benefit of the widow or her children:

Provided, That where a widow is at the date of her application entitled to receive from any source during the pension year periodical payments of money on behalf of herself or of any of her children as aforesaid such money shall be included in the computation of the annual income, although no part thereof was actually received during the year immediately preceding the pension year.

(2) There shall be deducted from the annual income any personal earnings of the applicant not exceeding the sum of one hundred pounds.

(3) If a widow or any of her children to whom the principal act applies is the owner of any property (other than furniture and personal effects) which produces no income, or which produces an income less than five per centum of the value of that property, the widow or child shall for the purposes of this act be deemed to be in receipt from that property of an annual income equal to five per centum of the value thereof.

(4) If a widow or any of her children to whom the principal act applies is in receipt of any income which is partly derived from property and is partly personal earnings in respect of that property, the magistrate to whom the application for a pension certificate is made shall apportion that income in such manner as he thinks just between the income derived from such property and such personal earnings.

(5) Money received on the sale or exchange of land or other property and money received under an insurance policy on the destruction or damage by fire or otherwise of a building or other property shall not be included in the computation of the annual income.

(6) This section is in substitution for section eight of the principal act, which section is hereby repealed accordingly.

7. (1) In addition to the powers conferred by section twenty-three of the principal act, the magistrate may at any time, on the application of the commissioner, review any pension certificate during the currency thereof on the ground of the altered circumstances of the pensioner, and may either cancel the same or vary the same in such manner as he thinks fit, having regard to the provisions of the principal act and this act.

(2) Any order so made by the magistrate shall take effect as from the date of the order, or from such other date as is fixed by the order.

8. Notwithstanding anything in section twenty of the principal act, if a widow in receipt of a pension dies, the guardian or other person for the time being having the care or control of her children to whom the act applies shall, subject to the provisions of the said act and with the approval of the commissioner, be entitled to receive the pension to which the widow would have been entitled in respect of her children if she had lived.¹

¹ The total deaths of widows receiving pensions up to March 31, 1913, was 18. In 14 of these cases application was made and authority given for the continuance of the pensions to the guardians of the children.

REGULATIONS UNDER THE WIDOWS' PENSIONS ACT, 1911.

Pursuant to and in exercise of the powers in this behalf conferred upon him by the Widows' Pensions Act, 1911 (hereinafter referred to as "the said act"), His Excellency the Governor of the Dominion of New Zealand, acting by and with the advice and consent of the Executive Council of the said Dominion, doth hereby, for the purposes of the said act, make the following regulations, that is to say:

REGULATIONS.

Interpretation.

1. In these regulations "magistrate" means a stipendiary magistrate; "income year" means the year ending one month prior to the commencement of any pension year.

Original pension claims.

2. The original pension claim shall be in the form numbered 1 in the schedule hereto, and shall be issued only to or on behalf of a *bona fide* applicant for the pension. The claim shall be delivered to the registrar of the district in which the applicant resides, and such date of delivery, which shall be plainly stamped on the claim, shall be deemed to be the date of the making of the claim.

3. Where a pension claim is signed by a Maori applicant, or by any applicant who is the owner of native land, there shall be annexed a statement setting forth particulars of any customary rights or interest held in any block of land, whether under defined legal title or native custom, and such statement shall be deemed to be part of the pension claim to which it is expressed to refer, and there shall be indorsed thereon a certificate by a Government officer, to be given without fee, that the contents thereof were fully explained to and appeared to be fully understood by the applicant.

4. Each registrar shall keep a claim register in which all claims delivered to him shall be recorded and numbered consecutively in the order in which they are entered, so that no two entries shall bear the same number.

5. The registrar, after recording a claim and noting thereon its registered claim number, shall forthwith proceed to verify the statements of the applicant by the forms provided for the purpose, and while awaiting replies to his inquiries he shall forward the claim to the commissioner for the registrar general's certificate as to widowhood and the parentage and age of the children under the age of fourteen referred to therein, and for such particulars as to ownership of property as are obtainable from the various departments of State.

6. On return of the claim from the commissioner it shall be forwarded by the registrar, with replies to all inquiries made, to the magistrate exercising jurisdiction in the district, who shall on a date fixed for the investigation thereof proceed in open court, or, in his discretion, in chambers, to ascertain whether the applicant is entitled to a pension.

7. In connection with the investigation of pension claims the following provisions shall apply:

(a) If in the course of investigation evidence is required on any specific matter, the commissioner, or the registrar, or any person authorized by the magistrate, may inquire into the same, and for the purpose of such inquiry free access shall be given to—

- (1) The registers and records of any State department or office.
- (2) All real and personal property of the applicant, and all books, vouchers, and documents relating to such property or to the income of the applicant.

(b) The powers of inquiry and search hereby given shall be limited to specified pensioners or applicants for pension, and shall not be construed as authorizing any general search or inquiry.

(c) It shall be the duty of all officers of the aforesaid departments and offices, and of any bank, insurance company, or other corporation carrying on business in New Zealand, and of all officers of the Post Office Savings Bank, and of any other Government department which receives investments of money from the public, and of any private individual to make true answers to all questions, and to afford, without fee, all such information as may be reasonably required for the purpose of prosecuting such inquiry as aforesaid.

(d) The magistrate may, in his discretion, accept as testimony for or against the claim—

(1) A statutory declaration made by any reputable person, who therein declares to what he knows of his own knowledge to be true; or

(2) Any other documentary evidence, whether strictly legal evidence or not; or

(3) The sworn spoken evidence of any reputable person who deposes to what he knows to be true; or

(4) The knowledge or observation of the magistrate himself.

(e) The valuations for the time being appearing in the general valuation roll under the Valuation of Land Act, 1908, shall, so far as the same are applicable, be used for the purpose of assessing the value of the property of applicants for the pension.

8. No pension claim shall be admitted unless the evidence of the applicant is corroborated on all material points.

9. If by reason of physical disability or other sufficient cause the applicant is unable to attend the investigation, and the magistrate is satisfied that the documentary evidence in support of the claim is sufficient to establish or reject it, he shall not require the personal attendance of the applicant.

10. For the purposes of such investigation, all the powers under the Magistrates' Court Act, 1908, and the Old-age Pensions Act, 1908, shall be available for compelling the attendance of witnesses or obtaining corroboration of an applicant's statements, and every witness shall be examined on oath.

11. The registrar, or some person appointed by him, shall have the right to appear at the investigation of any claim and to examine or cross-examine the applicant or any witness.

12. The pension claim, with a minute of the magistrate's decision indorsed thereon, shall be filed by the registrar, and each decision shall be notified by the magistrate to the registrar, who shall in turn advise the applicant and note the purport thereof in the claim register.

13. If the magistrate's decision is that the claim is rejected, his notification to the registrar shall specify the grounds for rejection, and, after being noted in the claim register, shall be forwarded to the commissioner, who shall record and file the same.

14. If the magistrate decides that the claim is established, he shall forward to the registrar a certificate of establishment in the form numbered 2 in the schedule hereto.

15. Upon receipt of the said certificate, the registrar, after noting the claim register, shall enter the contents thereof in the pension register hereinafter referred to, and, after indorsing thereon the next available number therein, shall then forward it to the commissioner, who shall record and file the same.

16. The commissioner shall, in respect of each magistrate's certificate of establishment received by him, having regard to the provisions of the said act, issue a pension certificate in the form numbered 3 in the schedule hereto.

Pension register.

17. The pension register shall contain particulars of each magistrate's certificate, and also of each transfer warrant received by the registrar, and all entries therein shall be numbered consecutively so that no two entries in the same register shall bear the same number. There shall also be recorded therein particulars of any circumstance affecting the payment of a pension, and the registrar shall, in respect of every such record, the notification of which is not otherwise provided for in these regulations, forthwith advise the commissioner in writing, or by telegraph if the record relates to the payment of any installment the due date of which has passed.

Pension certificates.

18. The pension certificate shall set out on the face thereof the office of payment and also the date on which the first installment falls due, which in the case of the first year's pension shall be the first day of the calendar month next after the date of the making of the claim, and the same date in each year thereafter.

19. If a pension certificate is lost, destroyed, or mutilated, the pensioner or her duly authorized agent appointed under these regulations may make application by statutory declaration to the registrar or postmaster, who shall

forward the application to the commissioner with his recommendation. And satisfying himself that the original certificate has been lost (destroyed, mutilated, as the case may be, the commissioner shall issue a duplicate certificate, which shall bear across its face the word "Duplicate," and he shall instruct the paying office to pay on duplicate certificate only: *Provided*, That the issue of such duplicate may be delayed by the commissioner, at his discretion, for a period not exceeding one month from the date of the application, to give an opportunity for the finding of the original.

20. The application for transfer of a pension from one district to another shall be made in writing, and with respect thereto the following provisions shall apply:

(a) It shall not be granted unless the registrar to whom the application is made is satisfied that the pensioner is about to change or has permanently changed her residence to the new district, nor unless the pension certificate lodged with the application, for which latter a receipt shall be issued as a subsequent means of identification.

(b) For the purpose of effecting the transfer the registrar of the district in which the pension is registered shall issue a transfer warrant, and shall transmit the same, together with the pension certificate and all papers relating to the original granting of the pension and any renewal thereof, to the registrar of the new district.

(c) The registrar issuing the transfer warrant shall note the transfer in his pension register, and shall forthwith forward the application duly noted by him to the commissioner, who shall issue the necessary instructions to the paying office.

(d) The registrar receiving the aforesaid warrant and pension certificate shall note the contents of the warrant in his pension register, and, after supplying the new number by which it is recorded, forward it by first mail to the commissioner, and in exchange for the receipt previously issued for the pension certificate shall deliver the said certificate to the pensioner or to the duly authorized agent appointed under these regulations, having first noted thereon the new number and the names of the new district and paying office.

(e) The receipt for the pension certificate shall be attached to the pensioner's former papers, which shall be filed by the registrar.

21. If the pensioner or other person duly authorized to receive payment of installments of a pension desires that the office of payment only shall be changed, she or he shall make application in the form numbered 4 in the schedule hereto to the postmaster or to the registrar of the district in which she or he may be residing, and in support thereof shall produce the pension certificate. The officer receiving the application, after noting the change of office of payment on the pension certificate, which he shall return to the applicant, shall forward the application to the commissioner, who shall issue the necessary instructions to the paying office.

Payment of pensions.

22. The commissioner shall, in respect of every pension granted, provided payment has not been stopped for any reason, transmit to the paying office in every month a form of advice of payment of the instalment falling due on the first day of the following month, and such advice shall constitute the form of receipt for the said instalment.

23. When receiving payment of any installment of a pension, the payee shall give a receipt for the same, and when making payment the paying officer shall note on the back of the produced pension certificate the date and fact of such payment by affixing thereto his signature and office stamp: *Provided*, That the paying officer, if not satisfied as to the identity of the payee, shall withhold payment and report to the commissioner.

24. If the payee is other than the pensioner, the payee shall in such receipt certify that to his certain knowledge the pensioner is alive and residing in New Zealand, giving address, and that the installment applied for is properly payable.

25. The paying officer shall, in every case where the last installment covered by a pension certificate has been paid, retain the said certificate, and forward it with his accounts.

26. Whenever any installment is payable under a warrant issued under these regulations, the pension certificate shall be produced by the payee at the time of payment, together with the warrant; and, where the aforesaid warrant relates to a single installment, or the last of a series of installments, it shall

delivered up to and retained by the paying officer on payment of such installment, and forwarded with his accounts.

27. In the event of any installment being paid on production of a lost pension certificate after the issue of a duplicate of such certificate, or on a pension certificate during the currency of a warrant directing payment to other than the pensioner, the holder of such duplicate or warrant shall have no claims against His Majesty in respect of the installment so paid.

28. In the event of any installment being forfeited in terms of section 17 of the said act, the pensioner or other person authorized to collect the pension may make application to receive such installment in writing to the registrar or to the paying postmaster, to whom the pension certificate shall be produced, and such application shall be forwarded for consideration with a recommendation as to payment to the commissioner, who shall notify his decision direct to the applicant.

Agents' warrants.

29. With respect to a warrant issued in terms of section 18 of the said act, authorizing payment of instalments to any person for the benefit of the pensioner or of her children, the following provisions shall apply:

(a) The application for such warrant shall be made in writing to the registrar or to the paying postmaster, and shall be forwarded to the commissioner, accompanied by the pension certificate, if the pensioner consents to the application. If the pensioner does not consent to the application and refuses to give up the pension certificate, the application shall state these facts.

(b) The proposed payee, who must be a European of good repute, shall have reached the age of twenty-one years.

(c) The warrant, which shall be signed by the commissioner, shall be in the form numbered 5 in the schedule hereto, and shall continue in force only during the currency of the pension certificate to which it is expressed to relate: *Provided*, That it may be renewed upon the issue of a renewed pension certificate, and provided that it may be canceled by the commissioner at any time for good cause shown.

(d) No such warrant shall be issued in respect of a pension where the pensioner is absent or about to be absent from the district in which the agent is residing, unless under special circumstances, which shall be set forth in the application.

(e) The commissioner shall issue the warrant, together with the pension certificate if it has been forwarded with the application, direct to the person entitled thereto.

(f) If the pensioner does not consent to the application and refuses to give up the pension certificate, then, if the commissioner thinks fit to issue a warrant, the paying officer shall retain the pension certificate when next it comes into his hands, and forward it to the commissioner to be forwarded to the person entitled to the warrant.

(g) A warrant surrendered to the registrar at any time, or to the paying officer during its currency, shall be forwarded to the commissioner without delay.

Renewals of pension.

30. For the purpose of ascertaining whether a pensioner is entitled to a renewed pension certificate, the following provisions shall apply:

(a) An application shall be made to the registrar by the pensioner in the form numbered 6 in the schedule hereto immediately after the close of the income year: *Provided*, That where no application is lodged within three months after the expiry of the said income year, the registrar shall strike the pensioner's name off the pension register, and notify the commissioner that he has done so, and any subsequent application for a pension shall be made as an original claim, and treated accordingly.

(b) In order to facilitate the prompt furnishing of the application, the commissioner shall in each month forward to the registrar a list of pensions the income years of which are about to expire, accompanied by a blank form of application in each case, and the said forms of application shall forthwith be issued by the registrar to the respective pensioners.

(c) On receipt of the application duly completed, the registrar shall forthwith proceed to verify the statements of the pensioner by the forms provided for the purpose, and in due course shall transmit the application, with replies to all inquiries made, to the magistrate exercising jurisdiction in the district.

(d) The magistrate shall forthwith proceed to investigate the application in the same manner, with the same powers, and subject to the same provisions in the case of an original pension claim, with all necessary modifications.

31. Having ascertained that the requirements of the said act have or have not been conformed to, the magistrate shall indorse his decision on the application, and shall furnish to the registrar a certificate in the form numbered in the schedule hereto, and the registrar, after noting the purport thereof in the pension register, shall forthwith forward the said certificate to the commissioner, who shall record and file the same: *Provided*, That in every case where any alteration has been made in the amount of property previously owned, or where any change has taken place in the circumstances of a pensioner necessitating a variation in the amount of pension, the registrar shall supply the commissioner in writing with particulars of such alteration and change.

32. The commissioner shall, in respect of each such certificate received by him, having regard to the provisions of the said act, and provided the certificate shows the pensioner to be entitled thereto, issue a pension certificate in accordance therewith in exchange for the expired certificate.

33. Where, at the investigation of any application for the renewal of a pension, it is found that by reason of excess of property or income the pensioner is no longer qualified to receive the pension, or has drawn any pension in excess of the amount allowed by law, the registrar shall make application to the magistrate to have the pension certificate then current cancelled forthwith, and the registrar shall, in the event of any instalment having been collected subsequent to the receipt of such excess of property or income, call upon the pensioner to make refund of such instalments so collected.

Proceedings under sections 23, 24, and 25.

34. Any inquiry under section 23 of the said act shall be disposed of in the same manner and with the same powers as in the investigation of a pension claim, and for that purpose the provisions of the said act and of these regulations shall apply with all necessary modifications. The decision of the magistrate shall be notified to the registrar in writing, and, after being noted in the pension register, shall be forwarded to the commissioner, who shall record and file the same, and take such action as is necessary to comply with the terms thereof.

35. Where, as a result of any such inquiry or by any other means, it is ascertained that the pensioner has been paid in excess of the amount to which he was by law entitled, or that the pensioner or any person is guilty of fraud, and liable to the penalty provided by section 25 of the said act, and where it is decided by the commissioner to institute proceedings in the magistrate's court, the said proceedings, in the case of an action for recovery of pension overpaid, shall be by plaint, as provided by the Magistrates' Courts Act, 1908, and in the case of a prosecution for fraud shall be by information laid under the terms of the Justices of the Peace Act, 1908.

36. All proceedings under the said act whether in respect of an offence heretofore or hereafter committed, or of moneys recoverable under section 24 of the said act, shall be taken before a magistrate alone, and may be so taken at any time not exceeding six months from the time when the facts first came to the knowledge of the commissioner. In all such proceedings the registrar or other person appointed by the commissioner, may appear on behalf of the commissioner, and the fact that any person so appears shall be sufficient evidence of his authority so to do.

37. No court fees shall be payable in connection with any proceedings before a magistrate under these regulations.

38. All moneys received by way of refund, either with or without costs of proceedings, shall be paid into the public account at the nearest branch of the Bank of New Zealand, or, in the absence of any such bank, into the post-office account at the nearest post office, and the registrar shall forward the bank or post office receipt to the commissioner without delay, giving particulars of the refund.

Returns.

39. The registrar shall despatch to the commissioner immediately after the close of each month returns for the said month as under—

(a) A return of all new pensions granted during the month, indicating in their respective numerical order the numbers that have been allotted to transferred pensions.

(b) A return of all original pension claims investigated by the magistrate during the month and not granted, giving the reasons for rejection or adjournment.

(c) A return of the applications for renewed pension certificates refused or adjourned during the month, giving the reasons for such refusal or adjournment.

Duties of Government officers.

40. It shall be the duty of all Government officers to assist applicants in the preparation of their pension claims.

41. It shall be the duty of every registrar of the supreme court or clerk of a magistrate's court, if at the time of the conviction in his court of any female for any offence he has reason to believe that such female is a widow, to ascertain whether the said female is a pensioner under the said act, and if so to notify the commissioner in writing accordingly.

42. It shall be the duty of every registrar of deaths to notify the commissioner in writing of the death of every widow leaving children of the age of fourteen years and under, whose death is reported to him.

43. It shall be the duty of officers of the police force, in addition to assisting applicants in the preparation of their pension claims, to render such service as may be required by the commissioner, or the registrar, in connection with the investigation of any claim or any inquiry under the said act. Authority to incur expenditure by any such officer on any occasion must be obtained beforehand from the commissioner through the local registrar.

44. These regulations shall come into force in the 1st day of January, 1912.

FORMS UNDER THE WIDOWS' PENSIONS ACT, 1911.

ORIGINAL PENSION CLAIM.

No. —.

[This form is to be issued only to or on behalf of a bona fide applicant for pension.]

To the registrar of pensions at —:

I, the undersigned, being a widow, hereby make claim for a pension under the aforesaid act.

My present full name is —. My former full name was [or names were] —. My full address is —. My occupation is [or was] —. I have lived previously in New Zealand at —. I was born at —, in the country of —, on the — day of —, 18—. I am a British subject [state if by birth or naturalization] (and produce naturalization papers of self or late husband). I arrived in New Zealand on the — day of —, 1—, at the port of —, in the ship —. [If absent from New Zealand during the past six months, state when.] I was married at —, on the — day of —, 1—. My late husband's name was —. He died at —, on the — day of —, 1—. His death was registered at —. The total number of children born to me is [quote number only].

The following particulars relate to all my children who are under fourteen years of age and are dependent on me for their support:

Names of children in full (under fourteen years).	Dates of birth.	Places of birth.	Places of registration of birth.

The name and address of a person [who must be well known and not a relative] who knows my circumstances are as follows:

[Registrar to issue Form H].

The income of myself and of such of my children as are under the age of fourteen years during the past twelve months has been as follows:

- £
1. Salary, wages, or other personal earnings.....

2. Profits from business.....

3. Superannuation or other pension.....

4. Annuity from life assurance company or other source.....

5. Money left by will or legacy.....

6. Dividends from shares, debentures, or investments of any kind.....

7. Money from life assurance company—such as loan, bonus, surrender value, or sum assured.....

8. Money received as compensation for accident, loss of office, or other cause.....

9. Interest on money lent on mortgage, in bank, or other institution.....

10. Money derived by way of rent from property.....

11. Money derived from sale of milk, grain, or produce of any kind.....

12. Money withdrawn from bank or obtained by mortgage on property.....

13. Allowances or valuable consideration received from relatives or other persons.....

14. Estimated value of free board and lodging.....

The names and addresses of the persons from whom above income was received are as follows:

[Registrar to issue Form G1 or G2].

The following interests in land and house property are owned by me or my children under fourteen ears of age:

Description.	Section and block Nos.	Locality.	Area.	Government valuation.
Freehold..... Leasehold..... Life interest.....			A. R. P.	

NOTE.—Particulars of native land to be supplied on separate form.

[Registrar to issue Form C.]

The above property is mortgaged to [give full name, address, and occupation of mortgagee].
The amount owing on this mortgage at the present time is £ _____.

[Registrar to issue Form L]

Money owned by me or my children under fourteen years of age is as follows:

	Amount in bank.	Where account kept, and No. of pass book.	Amount with-drawn during past twelve months.
	£ s. d.		£ s. d.
In Post Office Bank..... In Bank of New Zealand..... In Bank of New South Wales..... In Bank of Australasia..... In Union Bank of Australia..... In National Bank of New Zealand..... In any other institution..... In any building society.....			

[Registrar to issue Forms B and D.]

Other property owned by me or by my children under fourteen years of age is as follows: £
Furniture and personal effects [if insured, give insured value].....
Cash in hand, or lent to, or in hands of [give name and address].....
Live stock [sheep, cattle, horses, etc.].....
Value of shares, debentures, or bonds in any company, institution, building, or other society [particulars].....
Value of interest in business, stock in trade, or venture of any kind [particulars].....
Any other property (not already specified) [particulars].....
Total.....

Particulars of bill of sale or mortgage on any of this property are as follows: _____:
[If any of this property is insured, state which, and give amount of insurance: _____.]
The following property, owned by me or my children, has been transferred or sold during the past twelve months:

Description.	Name and address of person to whom transferred.	Date of transfer.	Amount received for transfer.
Freehold or leasehold..... Cash, or money on mortgage..... Furniture, stock, shares..... Interest in business..... Life or other interest.....			£ s. d.

The money received by me for transfer of above property has been disposed of as follows:
In addition to property now owned or transferred as shown in the foregoing statement, money, or other valuable consideration has been received and disposed of by me or my children under fourteen during the past twelve months as follows:
In the event of a pension being granted to me, I desire—
1. That installments be made payable at the post office at _____.
[NOTE.—Payment can be arranged at any post office which is not a money-order office by registered letter.]
2. That, on account of my physical inability to attend the above post office, installments be made payable for the benefit of myself and children to—Full name, _____, Occupation and address, _____.
I do hereby solemnly and sincerely declare that the contents of this my claim are true and correct in every particular, and that to the best of my knowledge and belief I have fulfilled all the requirements and am exempt from all the disqualifications under the

aforesaid act up to the date of this my claim, and am entitled to a pension. And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of an act of the General Assembly of New Zealand intituled the Justices of the Peace Act, 1908.

[Signature of applicant.]

Declared by the said _____, at _____, this _____ day of _____, 19____, before me, the declarant fully understanding the contents of this claim, _____, justice of the peace [or solicitor, or registrar of pensions, or postmaster, or constable.]

This is to certify that the contents of this claim have been read over and fully explained to the applicant, who appeared to fully understand the meaning thereof.

Postmaster [or Clerk of Court, or Constable, or Registrar of Pensions].

[Date.]

Magistrate's notes.

I have investigated the application herein, and find the following facts proved: 1. Applicant is a widow. 2. Applicant is a British subject. 3. Applicant has _____ children who are under fourteen years of age. 4. Applicant has been resident in New Zealand for six months. 5. Applicant has not transferred property to qualify for the pension. 6. Applicant is of sober habits and of good moral character. 7. The income of applicant and such of her children as are under fourteen is as follows:

	£	£
(a) Personal earnings	-----	
Less exemption	-----	100
(b) Actual income from property	-----	
(c) Actual income from all other sources	-----	
(d) Constructive income in terms of section 8 (2): Home, £-----; furniture and effects, £----- (less mortgage, -----)	-----	
Cash	-----	
All other property	-----	
Less mortgage	-----	
Total	-----	
5 per cent	-----	
Total income	-----	

Notes: _____.
Decision: _____.
Date: _____, 191-.

_____, Stipendiary Magistrate.

MAGISTRATE'S CERTIFICATE OF ESTABLISHMENT.

Claim No. _____. District, _____. Pension No. _____.

I hereby certify that the above-numbered claim, made by _____ [occupation; if no present occupation, state former occupation], of _____, has this day been investigated by me, and it has been proved to my satisfaction—

- 1. That the applicant fulfills the conditions of the aforesaid act.
- 2. That the applicant is the mother of _____ child[ren] under the age of fourteen years, and is entitled to a maximum pension of £_____, subject to the deduction shown hereunder.
- 3. That the applicant's income from all sources is as follows:

	Net income.
	£
(a) Income from personal earnings	£
Less statutory exemption	£100
(b) Actual income from property [to be included only when more than 5 per cent of value of property (see below)]	
(c) Actual income from other sources	
(d) Constructive income (in terms of section 8 (2)):	
On account of home	£
Less mortgage	£
	£
On account of furniture and effects	£
Less mortgage	£
	£
On account of cash	£
On account of other property ¹	£
Less mortgage	£
	£
Total property	£
Five per cent. of property [to be included when more than actual income from property (see above)]	
Total income	
Deduction on account of income in excess of £30	
Decision: The applicant is granted a pension of £	

¹ Particulars of other property.

The pension year commences on the 1st day of —, 191—.

—, Magistrate.

[Date.]

Payment is desired at the — post office.

Warrant under section 18 is required on account of —, in favor of [full name, occupation, and address.]

Noted in claim register and in pension register: [Initials of registrar.]

PENSION CERTIFICATE.

The pension being for the personal support of the pensioner, this certificate is absolutely inalienable whether by way of assignment, charge, execution, bankruptcy, or otherwise howsoever.

(Not transferable.)

District, —.

Certificate No. —.

This is to certify that — has been granted a pension of — pounds sterling, payable by twelve equal monthly installments of £—, of which the first installment is payable on the 1st day of —, 191—, and each subsequent installment on the first day of each calendar month thereafter, at the post office at —.

Countersigned:

—, Commissioner.

[Date.]

Specimen of signature of pensioner: —.

CAUTION.—Installments of pension are payable for a period of one calendar month after due date, and should be collected during that month.

APPLICATION FOR CHANGE OF OFFICE OF PAYMENT.

[NOTE.—Payment can be made at any post office in New Zealand not a money-order office by registered letter.]

Pension certificate No. —.

District, —.

I, — [address], being the pensioner [or, as the case may be, the duly authorized agent], pursuant to the above-numbered pension certificate, hereby apply that the office of payment may be changed from — to —, on the grounds that —.

The installments required at the new paying office are as follows:

— [signature of applicant].

[Date.]

To be forwarded through registrar in every case.

The commissioner, Wellington:

For your information. The change has been noted in my widows' pension register, and the pension certificate has been altered.

—, Registrar at —.

WARRANT UNDER SECTION 18.

To be surrendered on payment of the installment due 1st —, 19—.

District, —. Pension certificate No. —.

I hereby direct that the installments of pension payable pursuant to the attached pension certificate shall be payable for the benefit of the pensioner and her children to [full name, occupation, and address].

Countersigned:

[Date.]

—, Commissioner.

CAUTION.—It is not lawful for an agent, appointed under this warrant, to collect an installment after the death or remarriage of the pensioner, or while the pensioner is not residing in New Zealand.

APPLICATION FOR RENEWED PENSION CERTIFICATE.

Claim No. —. Previous pension, £—.

Pension No. —.

To the registrar of pensions at —:

I, the undersigned, hereby make claim for a renewal of my pension under the afore-said act, to be made payable at the — post office. My full name is —. My full address is —. The names of my children who are still under the age of fourteen years are: —. It is my wish that installments of my pension shall continue to be drawn by [name, occupation, and address]. For the twelve months ended the 1st day of —, 191—, the income of myself and of such of my children as are under the age of fourteen years has been as follows:

£

1. Salary, wages, or other personal earnings-----
2. Profits from business-----
3. Superannuation or other pension-----
4. Annuity from life assurance company or other source-----
5. Money left by will or legacy-----
6. Dividends from shares, debentures, or investments of any kind-----
7. Money from life assurance company, such as loan, bonus, surrender value, or sum assured-----
8. Money received as compensation for accident, loss of office, or other cause--
9. Interest on money lent on mortgage, in bank, or other institution-----
10. Money derived by way of rent from property-----
11. Money derived from sale of milk, grain, or produce of any kind-----
12. Money withdrawn from bank or obtained by mortgage on property-----

£

13. Allowances or valuable consideration received from relatives or other persons.

14. Estimated value of free board and lodging.

Total.

Actual date of receipt of income exceeding £60 (other than personal earnings) was _____. Names and addresses of persons from whom above income was received: _____.

[Registrar to issue Forms G1 or G2.]

Property owned by me and my children under 14 years of age is as follows:

	Owned by me.	Owned by my husband [wife].
	£	£
Land and house property (used as a home).....		
Furniture and personal effects [if insured, give insured value].....		
Land and house property (not used as a home).....		
Money in hand, in bank, or lent out.....		
Live stock, shares, or other property [give particulars].....		
Totals		

The above property is mortgaged to [give full name, address, and occupation of mortgagee]:_____. Amount owing on said mortgage at the present time is: On home and furniture, £ _____; on other property £ _____.

[Registrar to issue Form 1.]

Property sold or transferred by me during the past year is as follows:

Description.	Name and address of person to whom sold or transferred.	Amount received for transfer.
		£
Land and house property.....		
Furniture and personal effects.....		
Cash or money on mortgage.....		
Live stock, shares, &c.....		
Interest in business.....		
Any other property [particulars].....		

The money received by me for transfer of property above has been disposed of as follows: _____.

In support of my application I solemnly and sincerely declare as follows: (1) That the contents of this my application for renewal of pension are correct in every detail. (2) That, to the best of my knowledge and belief, I have fulfilled all the requirements and am exempt from all the disqualifications under the aforesaid act. And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of an act of the General Assembly of New Zealand intituled the Justices of the Peace Act, 1908.

Declared by the said _____, at _____, this ____ day of _____, 191-, before me, _____, justice of the peace [or solicitor, or registrar of pensions, or postmaster, or constable.]

Magistrate's notes.

I have investigated the application herein, and find the following facts proved: 1. Applicant is still a widow. 2. Applicant has ____ children under fourteen years of age. 3. Applicant has not transferred property to qualify for the pension. 4. Applicant is of sober habits and of good moral character. 5. The income of applicant and such of her children as are under fourteen is as follows:

(a) Personal earnings £____, pension £_____ £100 £

Less exemption_____

(b) Actual income from property_____

(c) Actual income from all other sources_____

(d) Constructive income (in terms of section 8 (2)):

Home, £____; furniture and effects, £_____ £

Less mortgage_____

Cash _____

All other property_____

Less mortgage_____

Total_____

Five per cent._____

Total income_____

Notes: _____.
Decisions: _____.
Date: _____, 191-.

_____, Stipendiary Magistrate.

the widows were receiving a pension of £30 (\$146.10); 239 a pension of £24 (\$116.88); 346 a pension of £18 (\$87.66); and 406 a pension of £12 (\$58.44). 98 widows in the four groups, who had incomes in excess of the amount exempt from consideration, were receiving pensions at the slightly lowered rates provided for in sections 7 and 8 of the principal act.

The income and property of the 1,313 widows' pensioners at the end of the year (exclusive of the pensions) were as follows:

Income—		
From property.....	£8,431	\$41,058.97
From other sources (including personal earnings).....	38,998	189,920.26
Total.....	47,429	230,979.23
Average income per pensioner.....	36	175.32
Property—		
Homes.....	115,885	564,359.96
Cash.....	36,791	179,172.17
Other property.....	41,172	200,507.64
Less mortgages.....	193,848	944,039.76
	53,178	258,976.86
Total.....	140,670	685,062.90
Average amount of property per pensioner.....	107	521.09

Of 903 of the 1,313 widows the occupation given was domestic duties; of 100, charwoman; of 48, dressmaker; of 41, boarding housekeeper; of 38, nurse; of 34, laundress; of 17, factory hand; of 16, tailoress; of 15, machinist; of 13, dairy farmer; of 12, shopkeeper; of 9, shop assistant; of 7, postmistress; of 6, farmer; of 6, music teacher. The remaining 48 were scattered under a number of different occupations.

Only 36 of the 1,313 widows on the roll March 31, 1913, were over 55 years of age. (The amendment of 1911 to the Old-age Pension Act provides an old-age pension in excess of the maximum available as a widows' pension to women 55 or over with children under 14.) The remainder represent approximately 15 per cent of the total number of widows in the Dominion between the ages of 20 and 55.

(From the fourteenth and fifteenth annual reports of the New Zealand pensions department, 1912-13.)

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U. S. DEPARTMENT OF LABOR
CHILDREN'S BUREAU

JULIA C. LATHROP, Chief

INFANT CARE

BY

MRS. MAX WEST



CARE OF CHILDREN SERIES No. 2
Bureau Publication No. 8



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GOVERNMENT PRINTING OFFICE
1914

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CONTENTS.

	Page.
Blank form for recording the baby's birth.....	Second page of cover.
Letter of transmittal.....	7
Birth registration.....	9
Living conditions.....	9-10
Nursery.....	10-14
Light and ventilation.....	10-11
Heating.....	11
Cleaning.....	11
Bed.....	11-14
Pillow.....	12
Making the bed.....	12-14
Other equipment.....	14
Clothing.....	14-23
Bands.....	15
Shirts.....	15-16
Petticoats.....	16
Slips.....	16
Wrappers and nightgowns.....	16
Diapers.....	16-19
Pads.....	17
How to put on the diaper.....	17-18
Changing the diaper.....	18
Shoes and stockings.....	19
Cloaks and caps.....	19-23
Out-of-door life.....	23-26
When not to take the baby out.....	23
Caution.....	24
Creeping pen.....	24
Vehicles.....	25-26
The care of the baby.....	26-31
Nursemaids.....	26
Baths and bathing.....	26-29
Cool baths.....	28
Salt.....	28
Starch.....	29
Soda.....	29
Bran.....	29
Sea bathing.....	29
How to lift the baby.....	29
High chair.....	29-30
Toys.....	30
Care of the special organs.....	30-31
Eyes.....	30
Mouth.....	30
Ears.....	30
Nose.....	30
Genital organs.....	30-31

Amount of food.....	42-43
Preparation of the food.....	43-47
Utensils.....	43-44
Bottles.....	44-45
Nipples.....	45-46
Care of nipples.....	46
How to prepare the feedings.....	46
Pasteurizing.....	46
Boiling.....	47
How to give the baby the bottle.....	47
Normal feeding.....	48
Underfeeding.....	48
Overfeeding.....	48
Proprietary foods.....	48
Drinking water.....	49
The feeding of older infants.....	49-50
Infant feeding in the Tropics.....	50
Infant stools.....	50-51
The normal baby.....	51-56
Development.....	51-52
Teeth.....	52-55
Deciduous or "milk" teeth.....	53, 54
Growth.....	54
Care.....	54
Ailments of teething.....	54-55
Weaning.....	55-56
When to wean.....	55-56
Weaning from the bottle.....	56

	Page.
Sleep	56-59
Amount.....	56
Regularity.....	56-57
Temperature of sleeping room.....	57-58
Disturbed sleep.....	58
Medicines.....	58-59
Habits, training, and discipline	59-63
Systematic care.....	59
Playing with the baby.....	59-60
Bad habits.....	60-62
Crying.....	60-61
"Pacifiers" or "comforts".....	61
Thumb or finger sucking.....	61
Bed wetting.....	61-62
Masturbation.....	62
Punishment.....	62
Early training.....	62-63
How to keep the baby well	63-74
Common ailments.....	64-71
Diarrhea.....	64-65
Constipation.....	65-66
Hiccough.....	66
Colic.....	66-67
Convulsions.....	67
Croup.....	67-68
Cold in the head (coryza).....	68
Prickly heat.....	68-69
Chafing.....	69
Eczema.....	69
Milk crust.....	69-70
Rickets.....	70
Scurvy.....	70
Adenoids and enlarged tonsils.....	70-71
Contagious diseases.....	71-74
Measles.....	71-72
Whooping cough.....	72
Syphilis.....	72-73
Tuberculosis.....	73
Hookworm disease.....	73-74
Vulvovaginitis.....	74
Trachoma.....	74
General health conditions	75-77
Germs.....	75
Flies.....	75-76
Patent medicines.....	76-77
Vaccination.....	77
To take the temperature.....	77
Cleanly habits.....	77
Recipes	78-81
Gruels and cereal jellies.....	78
Barley.....	78
Oatmeal.....	78
Rice and wheat.....	78
Corn meal.....	78

Recipes—Continued.

Fruits and fruit juices.....	78-79
Meats.....	79
Scraped beef or mutton.....	79
Beef juice.....	79
Broths.....	79
Breads.....	79-80
Toast.....	79-80
Dried bread.....	80
Bran bread.....	80
Eggs.....	80
Coddled eggs.....	80
Vegetables.....	80-81
Cauliflower.....	80
Spinach.....	80
Asparagus.....	80-81
Carrots.....	81
Beans.....	81
Green peas.....	81
Cream soups.....	81
Appendix.....	82-83
Government publications on domestic science.....	82-83
Milk.....	83
Other foods.....	82-83
Insects.....	83
The house.....	83
Privies.....	83
Sewage disposal.....	83
Disease.....	83
Drugs.....	83
Disinfectants.....	83
Hygiene of children.....	83
Birth registration.....	83
Blank form for recording the baby's weight.....	Third page of cover

ILLUSTRATIONS.

Plate I. Baby's bed clothing.....	1
II. Method of adjusting bed covers.....	1
III. Method of folding diaper.....	1
IV. Diagram of baby's foot and shoes.....	2
V. Children dressed for summer day.....	2
VI. Winter wrap and hood.....	2
VII. Pattern for above.....	2
VIII. Creeping pen.....	2
IX. Ice box and pasteurizer.....	4
X. Thermometers.....	4
XI. Nursing bottle and other articles.....	4
XII. Way to hold baby.....	4
XIII. Position of teeth in mouth.....	5
XIV. Adenoid growth.....	7

LETTER OF TRANSMITTAL.

DEPARTMENT OF LABOR,
CHILDREN'S BUREAU,
July 22, 1914.

SIR: I transmit herewith the second monograph in the Care of Children series.

This issue discusses the care of the baby to the close of the second year. It is written by Mrs. Max West, who wrote the first number of this series, entitled "Prenatal Care," and the same method has been used in its preparation—namely, exhaustive study of the standard literature on the hygiene of infancy as well as consultations with physicians, nurses, and other specialists in this field.

Like the preceding one of the series, it is addressed to the average mother of this country. There is no purpose to invade the field of the medical or nursing professions, but rather to furnish such statements regarding hygiene and normal living as every mother has a right to possess in the interest of herself and her children. It endeavors to present the accepted views of the best authorities at the present time. Footnotes indicate the chief sources.

The bureau is deeply indebted to many persons for aid, not only to those who have given generously of valuable professional time to read and criticize the manuscript but as well to those who have advised as to materials and appliances and to those who have aided in securing the illustrations.

Respectfully submitted.

JULIA C. LATHROP, *Chief.*

HON. WILLIAM B. WILSON,
Secretary of Labor.

INFANT CARE.

BIRTH REGISTRATION.

One of the most important services to render the newborn baby is to have his birth promptly and properly registered.

In most States the attending physician or midwife is required by law to report the birth to the proper authority, who will see that the child's name, the date of his birth, and other particulars are made a matter of public record. Birth registration may be of the greatest importance when the child is older, and parents should make sure that this duty is not neglected.¹

LIVING CONDITIONS.

The house which is to be the home of children should be sunny, well ventilated, and dry. The choice is usually limited by the size of the family income, but there is, nevertheless, within this limit some range of selection. Among houses of the same rental one may be in better repair than another, or the houses on one side of the street may be sunnier than those on the other, or one house may have more space about it than another, or the plumbing, drainage, or other conveniences in one may be in a more sanitary condition than in another.

Flats and apartments do not usually afford enough freedom for growing children, although a baby may do very well in such a place until he is 2 or 3 years old, when he needs more room, both indoors and out. Tenements with dark rooms are not fit homes for children. Suburban homes, or those in the outskirts of cities or close to public parks, give to city children of the average family the best chance for proper growth and development.

In selecting a city house it is wise to consider what possibilities it has for future improvement, as, for example, whether the roof can be utilized for play space, whether there is room for a porch or bay window on any side, and whether the back yard can be made into a pleasant out-of-door living room for the family.

¹ Write to the Children's Bureau, U. S. Department of Labor, Washington, D. C., for monograph on birth registration.

Those who live in smaller cities, towns, and rural communities find it easier to provide their children with light, air, and out-of-door space. In every case the house and its surroundings should be carefully inspected. The cellar or basement should be clean and dry; if there is a well it should be so located as to prevent the water from being poisoned by the foul drainage from stable or outhouses. Pools of stagnant water, manure heaps, piles of garbage, refuse or rubbish of any sort, or open privies are all dangerous to health and furnish breeding places for disease-carrying insects, such as flies and mosquitoes.

The health of the baby is so dependent upon sanitary surroundings that a list of Government publications relating to the hygiene of the home is given in the appendix to this pamphlet. (See Appendix.)

NURSERY.

LIGHT AND VENTILATION.

Sunshine is as necessary for the baby as for the plant, and a baby deprived of it will pine and droop just as a plant does; therefore the room in which the sun shines for the longest period of the day should be chosen for the nursery.

The room should have a constant supply of fresh air, as the baby will be much less liable to illness than when he is deprived of it. To "air" a room at intervals by opening the windows is well, but a far better plan is to have a continual stream of fresh air flowing through. To do this the windows must be opened on opposite sides of the room in order to secure a cross draft, which is always necessary to real ventilation. When the outside temperature is so extremely low that a comfortable temperature can not be maintained with the windows open, outside air should be frequently admitted by opening wide the windows on opposite sides and flushing every part of the room for a few moments. In severe weather it is a good plan to air the nursery whenever the baby is taken into another room. In all the mild months the windows should be kept constantly open night and day.

The overwhelming importance of fresh air to children is strikingly shown in a recent English report on the mortality, by different social groups, among the inhabitants of well-ventilated and ill-ventilated houses in the same towns. The families chosen were of similar income and social status.¹

The general result of this investigation was to show that in every group comprising children under 5 years of age not only were

¹ A report on Relative Mortality in Through and Back-to-Back Houses in certain Towns in the West Riding of Yorkshire, by Dr. L. W. Darra Mair, London, 1910.

deaths from diseases of the respiratory tract, such as pneumonia and bronchitis, far more frequent in the badly ventilated houses, as might have been expected, but the deaths from diseases caused by defective development and malnutrition were 40 per cent higher in the poorly ventilated houses than in those which had through ventilation, showing the great importance of fresh air to all young children.

HEATING.

It is desirable to have a heating system which is readily controlled, so that the temperature of the room may be raised or lowered when necessary. Hot-air furnaces are considered more healthful than steam or hot water, because they provide for the circulation of fresh, moistened air. Gas and oil heaters should be avoided if any other method can be had, as such heaters exhaust the air of even a large room in a short time. An open grate in the room is an advantage, both because extra heat may be had when needed and because it helps to keep the air in the room in circulation.

CLEANING.

The floor should be bare, so that it can be kept clean by wiping it with a damp cloth or dust mop. There should be no heavy draperies nor upholstered furniture to catch dust. Painted walls which can be washed are sanitary and easily renewed.

BED.

The first bed may be made from an ordinary clothes basket (see Plate I) or from a light box, such as an orange crate. Later, a metal crib with a firm spring is desirable. Table padding or "silence" cloth, folded to four thicknesses, makes a very good mattress, because it is readily washable; when washed it should be hung out of doors to dry. A sanitary crib mattress may be made by stuffing bed ticking with excelsior, which can be renewed as often as necessary. Sphagnum moss, or straw, can be used in the same way. The mattress cover may be made of bed ticking or heavy unbleached muslin, which can be emptied, washed, and dried in the sun at intervals. In case excelsior or straw is used for the temporary filling, it should be made as level and smooth as possible, and a piece of soft felting or a small comfort should always be placed over the mattress to soften the rough surface. After the baby has learned not to wet the bed at night, an ordinary mattress of hair, felt, or cotton may be used, but it should be protected by oilcloth, rubber sheeting, or absorbent paper as an additional precaution. Since a rubber or oilcloth sheet is both hard and cold, a soft pad should always be used directly underneath the

dress entirely.) Over this place the cotton pad, then cover with a small sheet, which should be tucked under the mattress on all four sides so that the bed is perfectly smooth.

PLATE II.

FIGURE 1.

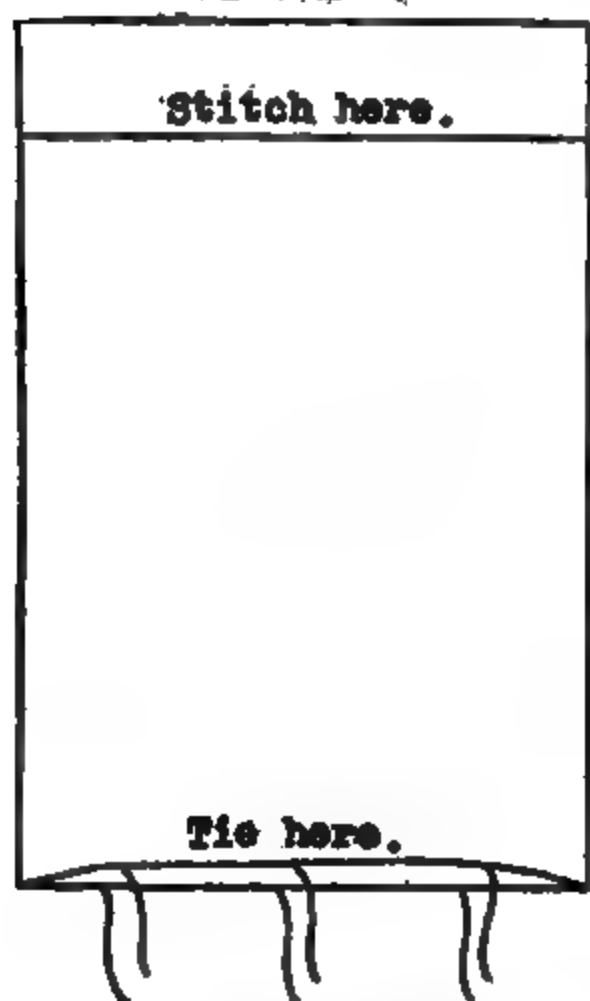


FIGURE 2.

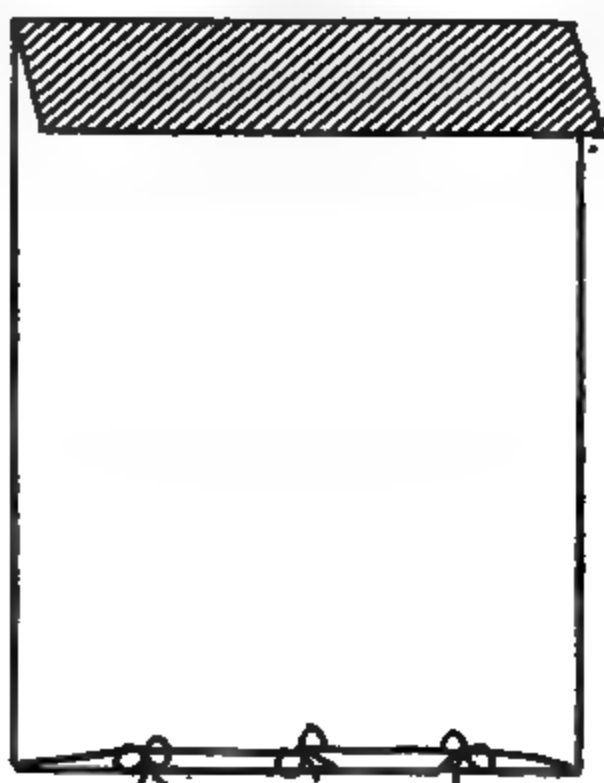


FIGURE 3.



Upper side.

FIGURE 4.

Lower side.

The above plate illustrates a method of adjusting the bed covers which has been found helpful.¹

¹ Courtesy of Miss Amy McMahon, Harriet Lane Home for Invalid Children, Johns Hopkins Hospital, Baltimore, Md.

Make a cotton bag the width of a crib blanket and 10 inches long closed on three sides like a pillowcase and open at the end, this end to be closed by buttons or tapes. Stitch the case straight across 10 inches below the closed end, thus making a flap. (See figure 1.) Now put the crib blankets (one or two, according to the temperature) inside this cover. Adjust the blankets smoothly within the cover, tie and button the open end, and turn down the flap at the other end. (See figure 2.) The object of this flap is to give additional protection to the blanket at the top to save it from being soiled or stained by milk, medicine, or by the material which the baby may vomit.

Then take the blanket thus covered and proceed as follows: Fold the two sides under about 10 inches and turn the bottom up under in the same way about one-third of its length, thus forming what may be described as a sort of loose sleeping bag. (See figures 3 and 4.) Put the baby on his bed and place the cover thus folded over him. The object is to prevent the rigidity of a bed made in the old-fashioned way, with the covers tucked under the mattress, and to give the baby freedom of motion. It is especially adapted for young babies before they are old enough to kick the covers off. Older children will need to have the cover fastened in some way, and in such cases it may be secured by safety pins to the mattress over the baby's shoulders. It is the cover which comes next to the baby and fits in closely around him that keeps him warm, and not an excess of bedclothing piled on top of him. In addition to the top cover a soft blanket wrapped closely around the baby, especially about the neck and shoulders, should be used in extremely cold weather.

Some of the additional advantages of the blanket cover here described are that it saves trouble in bed making, and especially that it protects the blankets so completely that they will need washing much less frequently than otherwise. The blankets should be well aired and sunned when not in use, and if sewed within close covers for the summer will be secure from moths.

OTHER EQUIPMENT.

This may include a screen to protect the baby from drafts, a low chair without arms for the mother, baby scales, bathtub, and a basket for the toilet articles. The other furniture of the room should consist of a chiffonier or bureau to hold the baby's clothing and other possessions, and two tables—one for the scales, basket, etc., and the other a low one on which the bathtub may be placed when the baby is being bathed. Later there may be a nursery chair and a high chair. Small rocking chairs are dangerous because they are so easily tipped over.

CLOTHING.

Clothing should always be adapted to season and climate. A baby is comfortably dressed when his clothing is warm enough without

of various kinds. In the North, or in winter, or in case the house can not be easily or sufficiently heated, or for very young or weak babies, shirts and bands which are part wool are advisable.

PETTICOATS.

Light-weight part-wool flannel may be used for the petticoat which for very young babies should not extend more than 10 inches below the feet. They may be made by the "princess" or "Cendrillon" model if warmth is desired, but for summer they should be made with a cotton waist, as in the case of older children. Petticoats should always hang from the shoulders.

SLIPS.

Slips should be made of some very soft material, such as cambray, nainsook, long cloth, or batiste. They should not be more than 12 inches long and should be very simply made. Care must be taken not to have anything about the neck that will scratch or irritate the tender skin, as eczema may be caused in this way. Starch is positively forbidden in a baby's clothes.

WRAPPERS AND NIGHTGOWNS.

Wrappers, either flannel or cotton, according to the weather, may be used in the place of slips, and in summer they do away with the need for petticoats as well. The only value of a long petticoat is to provide extra warmth and to make it easier to handle a little baby while the white slip serves only to keep the petticoat clean and to complete the conventional idea of a baby's toilet; therefore a simple wrapper which opens all the way down the front saves time and trouble for the mother and gives the baby comfort. Besides flannel other materials may be used, such as challis, nun's veiling, cashmere, henrietta cloth, or any other light, soft material which can be readily washed. Outing flannel may be used, but the fuzzy surface of cotton flannels is highly inflammable, and great care must be taken not to allow a spark of fire to reach the baby when wearing such a garment. These wrappers may be worn as nightgowns when the baby is older. Nightgowns and wrappers, both short and long, may be bought ready-made, a very satisfactory sort being made of stockinet. Winter nightgowns have a draw string run through the hem so that they may be drawn up to protect the baby's feet.

DIAPERS.

The diaper is by far the most troublesome part of the baby's outfit. The ordinary cotton or linen diaper made of "bird's-eye," domestic flannel, or terry cloth, is open to objections. In the first place a large number must be provided, which involves a considerable outlay of time and money on the mother's part. Then, as no diaper is fit for use a second time without having been washed and dried, the care

these garments adds to the labor of the household. In addition to these objections the ordinary diaper is hot and clumsy, not to speak of the objectionable odor which clings so persistently to it. There is evidence to show that a wad of thick materials between the legs may deform the thighs to some extent. Besides, unless the diaper is most carefully washed, with soap that contains nothing to irritate the skin (a bland white soap is best), is thoroughly rinsed, and well dried in the open air, there is danger that the baby's flesh may become chafed and sore, especially when hot, nonabsorbent material, such as canton flannel is used.

Pads.—But since diapers are necessary, some practical substitute for those in common use may be found. If an outside diaper is made of cheesecloth, or some other thin, soft, loosely woven material which is easy to wash, an inside pad may be used to catch the discharges. If this pad is made of something which may be destroyed, the most disagreeable part of the washing will be done away with; but even if the pad must be washed, the time and labor involved in washing pads will be much less than in washing an entire diaper. Washable pads may be made of any soft material at hand, such as old turkish towels or knitted underwear, or other material having a loose texture. Smooth materials, however soft, do not hold the discharges as well. Terry cloth, a material resembling turkish toweling, makes excellent pads after it has been washed a few times to render it more readily absorbent. From the Karitane Harris Hospital, in Dunedin, New Zealand, we learn of the use of sphagnum moss for these absorbent pads. The moss is that which florists use for packing plants and grows very extensively in the swamp regions of the United States, but it needs to be thoroughly dried and cleaned of sticks and stems before being used for this purpose.

Such a pad (i. e., a pad of sphagnum moss inclosed in cheesecloth) weighing only an ounce will completely absorb and retain a quarter of a pint of urine—say as much as would be passed in the night. This is infinitely cleaner and healthier than allowing the urine to spread over a wide area of napkin and nightdress, and thus cause extensive chilling and more or less irritation of the skin. Dry sphagnum forms an extremely light, clean, airy, elastic pad, which will yield in any direction and accommodate its shape to the parts.¹

Those living in the country where this moss grows may find it a great convenience to pick and dry the moss for this or other domestic purposes. Paper seems to promise the greatest possibilities for general use, and with the rapid increase in the manufacture of absorbent, or “bibulous” papers, as they are called in the trade, it is to be hoped that a satisfactory, effective, and cheap pad may be found even if an entire paper diaper does not prove to be practicable.

How to put on the diaper.—The ordinary diaper is a square of material from one-half to three-fourths of a yard wide, folded diagonally

¹ Feeding and Care of the Baby (New Zealand), 1913, p. 76.

and then folded again, making four thicknesses of material. If the inner pad is used, this outer diaper need be folded but once and the extra thickness will be secured in the pad.

PLATE III.

FIGURE 1.

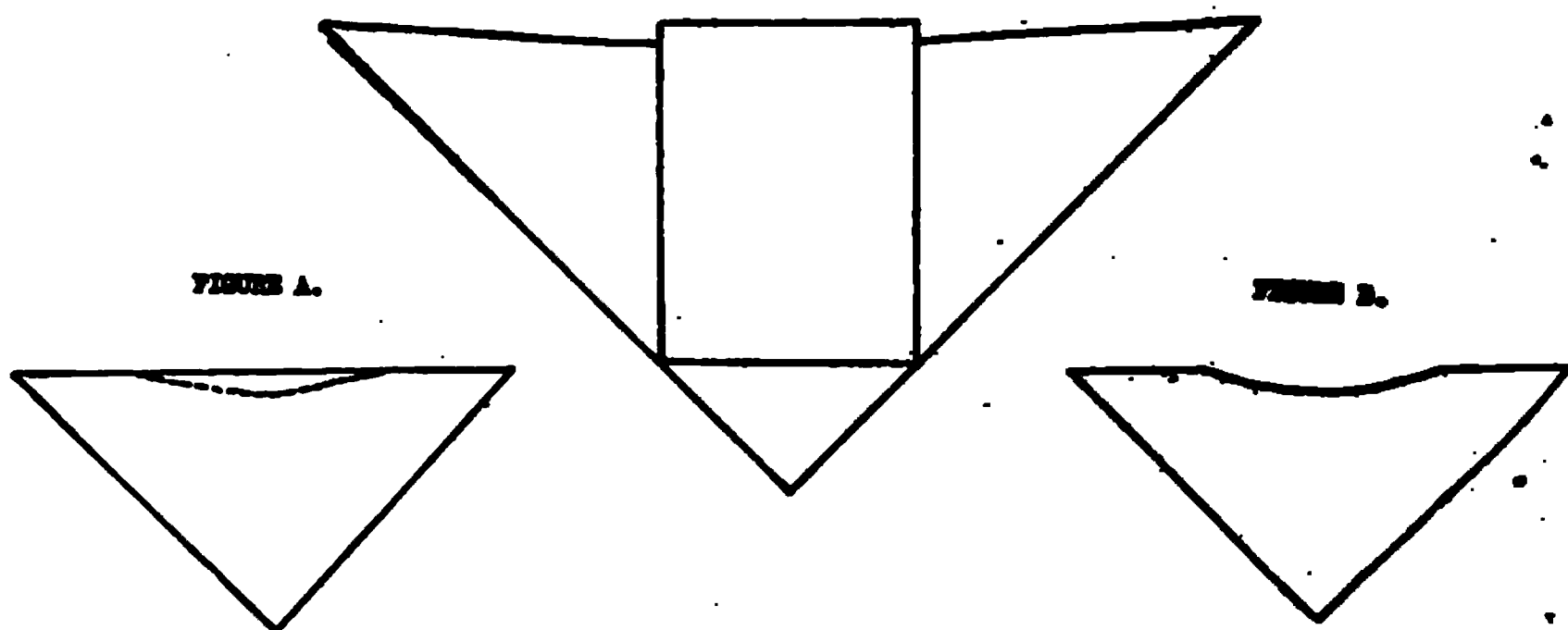


FIGURE 2.

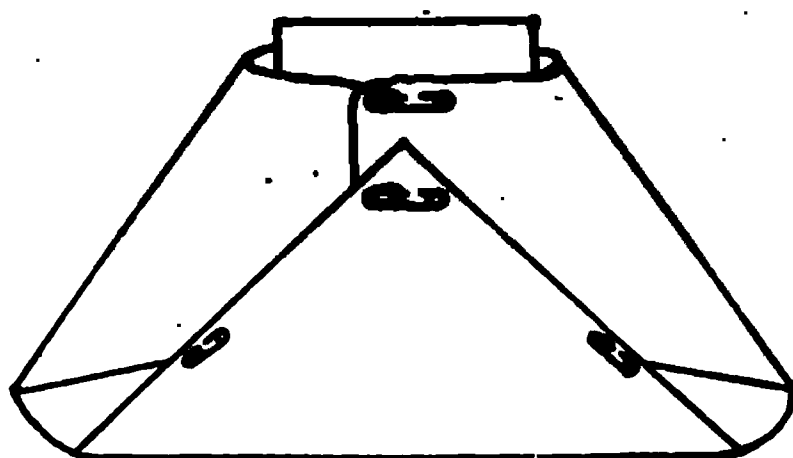
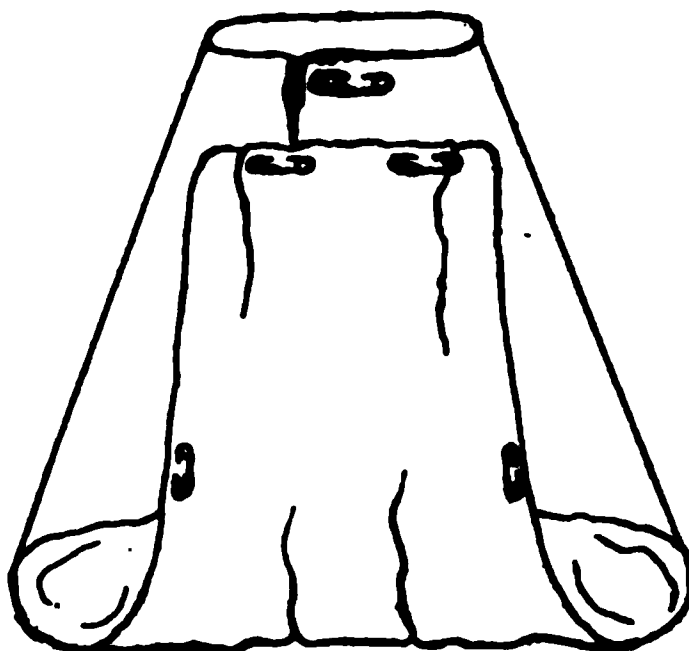


FIGURE 3.



Changing the diaper.—During the mother's waking hours the diaper should be changed as often as it is wet or soiled. In the night it should be changed when the baby is taken up to be fed.

In Plate III, figure A shows a square diaper which has had a small dart taken up in the middle of the top or diagonal side to make it fit slightly over the hips. Figure B shows the diaper folded with the

seam turned inside, figure 1 shows the folded diaper with the inner pad in position, and figure 2 the diaper as it appears when pinned. The square diaper is used in each of the sketches. Many physicians and nurses prefer the oblong or towel-shaped diaper, which does away with some of the superfluous material of the square form. The material is folded down at the top so that it is double under the seat. The lower corners are brought up between the legs and fastened in four places. Figure 3 illustrates the oblong diaper as it appears when folded and pinned. The babies in the picture on page 20, Plate V, are wearing oblong diapers.

SHOES AND STOCKINGS.

It is very important to keep the baby's legs and feet warm. Stockings and diaper should meet, leaving no part of the leg exposed. If the weather is warm the baby will not usually require any covering for his feet, but in cold weather and in all weather when it grows cold toward night it is well for him to wear a pair of merino stockings. These need not be all wool; indeed, if of a mixture of cotton they are much better, as they will not shrink. For an older baby, who is on the floor a good deal, stockings and soft-soled shoes are necessary for comfort, except during the heat of summer. All the shoes from the very first should be chosen to fit the natural shape of the foot, with broad toes and straight soles. Socks may be worn in summer, but in the cooler months the baby's legs should be entirely covered.

Plate IV¹ shows the actual shape of the bottom of a baby's foot, with suitable and unsuitable shoes.

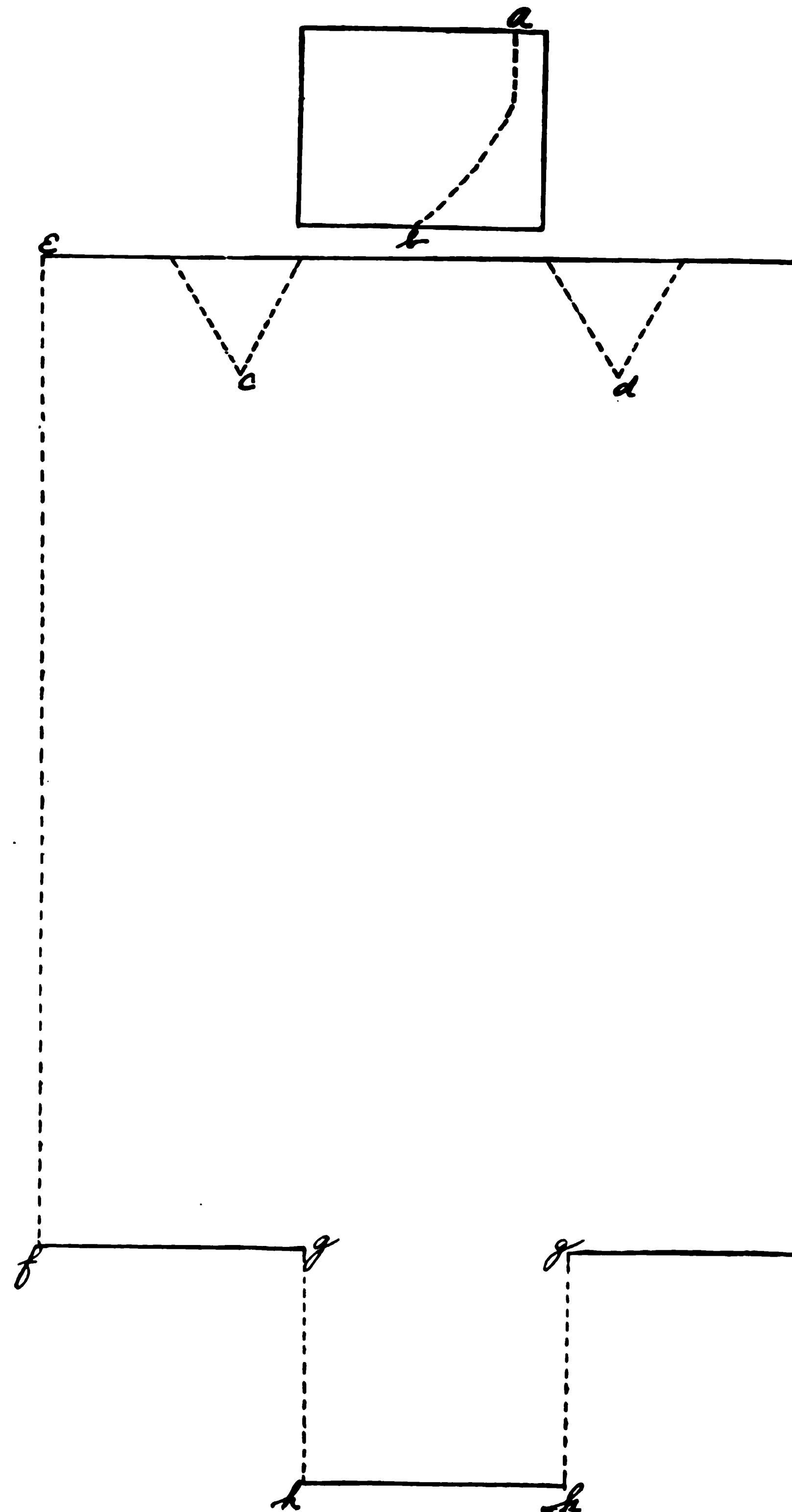
Plate V² shows some of the happy patrons of a day nursery in the stockyards district of Chicago dressed for a hot summer day.

CLOAKS AND CAPS.

Since a baby exercises very little when taken out in a carriage, he must be warmly wrapped. Cloaks should either be of warm woolen material or have an interlining of wool, or in cold climates both. For the "runabout" baby additional warmth is secured by the use of leggings, a sweater, overshoes, and mittens. In summer if a wrap is needed it may be of silk or cotton, although a cloak of challis, cashmere, or nun's veiling has more warmth and at the same time is light in weight. Caps should not be thick enough to cause the head to perspire. A silk cap with an interlining of wool wadding or of flannel may be used in winter. In the coldest weather a little hood knitted of woolen yarn, having a cape to come down under the coat collar and protect the neck, is excellent. Silk or muslin caps may be worn in the milder months, or the baby may go bare-headed if protected from the sun. No starch should be used in the caps, as stiff strings or ruffles will scratch the delicate skin of the baby and may produce eczema. Cap strings and ribbons should be

¹ Pediatrics, by Dr. Thomas M. Rotch.

² Courtesy of Dr. Alice Hamilton.



Cut a piece of eiderdown as indicated by dotted lines, making it long enough (from e to f) to reach from the baby's neck to about 4 to 6 inches below his feet, and wide enough to lap over entire chest on each side, thus giving double thickness over front of body. The darts in the top will make it fit somewhat over the shoulders. The extension at the bottom should be about one-third the length of the baby.

The hood, which should be fastened to the wrap in the back, is made by cutting along the dotted line, the flannel being double at the top. Sew these edges together. The cap may be lined and tied under the chin with ribbons if desired.

Put the wrap on by folding over first one side and then the other and fasten every 3 or 4 inches; then turn up the square over the feet, fastening with pins or buttons at corners as illustrated in the drawing.

OUT-OF-DOOR LIFE.

Keep the baby out of doors. Except in winter, begin when the baby is 2 weeks old to take him out for a few minutes every day in mild, pleasant weather, increasing the time gradually until he is staying out most of the time. Probably no other thing will do so much to insure a healthy babyhood as this, and the result will well repay whatever trouble is necessary to secure it. With the exceptions mentioned below, a baby may spend practically all the time out of doors, both sleeping and waking, if there is some one to look after him to see that he is protected against sun, wind, and dangerous insects. A young baby may stay in his carriage or crib on the porch, on the roof, under the trees, or in the back yard, where the busy mother can look after him; older babies who need exercise may be kept in a creeping pen either on the porch or in the yard. (See p. 25.) If it is not feasible to provide out-of-door sleeping places for these older babies, at least the windows of the nursery should be kept wide open most of the year.

WHEN NOT TO TAKE THE BABY OUT.

When the weather is very cold, as in winter in the North, when the snow is melting, or when there is a heavy storm in progress or a high wind blowing quantities of dust about, it will be best to give the baby his airing indoors or on a protected porch. Dress him as for going out, open all the windows wide, and let him remain in the fresh air for some time. Very young or delicate babies require much heat and must be very warmly covered to protect them against being chilled, and a baby under 3 months of age should not be taken out in severe weather; but plenty of fresh air is essential to all babies.

When the weather is excessively hot the baby should be taken out early in the day and then kept indoors until the late afternoon. From that time on until the rooms have cooled in the evening he should be kept out, being well protected from mosquitoes. If a screened porch is available, the health and comfort of the baby will be greatly increased.

CAUTION.

A word of caution should be given as to the danger of young children climbing up to open windows and falling out. If the windows have screens, they should be so carefully fastened in that there is no possibility of pushing them out. When screens are not in use the windows should either be lowered from the top or thin wooden slats should be used to protect the lower sash. Similar precautions must be used if the baby is put to sleep on the fire escape. Sleepers on porches are usually well protected.

The baby's eyes and head should always be carefully shielded from the direct sunlight. This is just as important while he is asleep as while awake. Do not allow the baby to lie staring up into the sky, even when the sun is not shining.

Great care should be taken to protect the baby from flies and mosquitoes. If the house is not provided with screens, the baby's bed, crib, or carriage should be covered with netting suspended over a pole or two clotheslines in the form of a tent, so as not to shut off the air. Never lay a netting directly over the baby's face.

CREEPING PEN.

A creeping pen affords the necessary protection to the baby and gives room for exercise. It consists of a fence made in four sections, each, say, 18 inches high and 4 feet long, hinged at three corners and latched at the fourth. Ready-made pens have spindles like a street rail, so that the baby may have something to take hold of when he tries to climb to his feet. As it folds together, the pen can be readily moved about. The floor of the pen should be made of something soft to save the baby from bumps. A cork mat is the cleanest and best material, but a blanket or rug will answer. When the pen is used in the yard a floor of clean white sand will not only protect the clothing but afford the baby who is old enough to play by himself much wholesome entertainment. A combination bed and play pen, the sides of which are covered with wire netting, is on the market. The bottom is made of flexible slats and covered below with netting. The bed has a cover so that the baby is completely protected from flies and mosquitoes, and is perfectly safe. It is furnished with casters, or wheels, so that it may be readily moved about, and it may be folded up when not in use.

When it is not possible to purchase one of the ready-made articles, an ingenious person may devise a satisfactory play pen from materials at hand. A board 6 or 8 feet long and a foot wide may be used to fence off a sunny corner of the nursery for a pen.

Plate VIII shows a creeping pen the sides of which are made from a tennis net.

charge of another child or of some person not altogether competent to judge of his comfort is often neglected. A more wholesome and natural place for the baby to take his airing is in the yard or on the porch, where he can be under the mother's supervision.

THE CARE OF THE BABY.¹

NURSEMAIDS.

It may be well to speak a word of warning as to nursemaids. One who has only to visit the parks of any city on a pleasant day to note the instances of neglect and carelessness on the part of nursemaids toward the babies in their charge. Infants are allowed to lie with the sun shining in their eyes; are permitted to become chilled, tired or hungry or to lie in wet diapers; they are scolded or jerked about by one arm, or fed with candy, cakes, or other unsuitable foods to keep them contented. When at home they may be left strapped in a high chair for long periods, or without the mother's knowledge may be given soothing sirups or other quieting medicines.

But it is not only in physical matters that grave harm may be done to the baby. A nurse sometimes threatens that the policeman, the doctor, or it may be a wholly imaginary creature or person, will come if necessary, to enforce her will. Fear instilled thus early in the impressionable mind of a child is often almost impossible to eradicate and may persist to the child's harm for many years. The mother must be on her guard to prevent this possibility. A too rigid obedience to the nurse should always be viewed with suspicion, and although there are, of course, many thoroughly honest and conscientious nursemaids, who are entirely devoted to the children in their care, no mother can afford to run the risk involved in neglecting to investigate the character of the nursemaid whom she engages. A nursemaid who shows evidence of ill health should be examined for tuberculosis or other chronic disease, as the baby may readily become infected from an attendant suffering from such illness.

BATHS AND BATHING.

Directions for the baby's first bath are given in the pamphlet on Prenatal Care.² A healthy baby should be bathed every day. During the first two weeks these and all matters pertaining to the care of the baby are usually under the doctor's or nurse's supervision. When the mother takes charge of the baby she will find it convenient, usually, to give the bath before the midmorning feeding and after the bowels have moved.

¹ See also "Care of the baby," Supplement to Public Health Reports No. 10, 1913.

² Prenatal Care, p. 30.

The room should be comfortably warmed to about 72 degrees. It is not wise to have the room so hot that the baby perspires, as there is grave danger of his being chilled when, the bath over, he is taken into another room where the temperature is lower or when the room itself is rapidly cooled. It is better for the baby to have his bath in a room at ordinary temperature than in a bathroom which is heated by oil or gas. The baby should be protected from drafts by screens or by a shield made by hanging a blanket over the backs of two chairs. The full tub bath may be given as soon as the scar where the navel cord was attached has fully healed. An infant bathtub serves every purpose for the first year of a baby's life or until he has outgrown it. A tiny baby may be bathed in a basin or bowl for some weeks. This basin should always be warmed before it is filled. The water should be at body heat or slightly above: that is, from 98 to 100 degrees. A bath thermometer is an inexpensive convenience and should be provided, but if none can be had the mother may test the temperature with her elbow. When the water feels neither hot nor cold it will be comfortable for the baby. It should be tested after the baby is undressed and ready to get into the water. Hot water should never be added to the bath while the baby is in the tub. Never leave a young baby alone in the tub. Never put the baby in the bath while the tub is standing on a stove or heater; he might be seriously burned in this way.

No unnecessary exposure or delay should take place, for in cold or cool weather the baby is quickly chilled. To prevent this, all the necessities, such as soap and towels, clothing, bath apron for the mother, tub, water, thermometer, powder, and the like should be placed at hand before undressing the baby. In some cases it may be much more convenient for the mother to give the bath at night, just before the baby's bedtime. Never bathe a baby within an hour after feeding. A baby should always have his own towels and wash rags. Soft cheesecloth makes excellent rags; the towels should be old and soft.

Before the baby is completely undressed his scalp should be washed, the head lowered a little to avoid getting soap in the eyes. Use a pure, bland, white, nontransparent soap. Very little soap is needed for cleaning a baby's skin, and it is most important that the skin be thoroughly rinsed. After the head and face have been washed and dried, remove the clothing and soap the entire body; then place the baby in the bath, holding him with the left forearm under the neck and shoulders, the hand under his arm, lifting the feet and legs with the right hand. Use the right hand to sponge the entire body, then lift the baby out and wrap him at once in a warmed towel. Dry carefully with soft warm towels, patting the skin gently. Never rub the baby's tender skin with anything less

smooth than the palm of the hand. Dress as rapidly as possible if the weather is cold, taking great pains not to expose him unnecessarily. When the weather is very hot in summer, only a slip and diaper are needed.

If the skin is carefully dried after the bath there will be little need for powder, and it should never be used as a cover for careless drying. It is well to use a little pure talcum powder in the creases and folds of the skin, under the arms, and around the buttocks, but it should not be used so generally as to fill the pores of the skin and clog them, and should be applied only after the skin is dry.

For one reason or another a baby sometimes objects to his bath. In such cases judicious coaxing may be employed. Toys which float will often divert the baby's attention and make him forget his objections to the water. Sometimes lowering him into the water wrapped in a towel or covering the top of the tub with a cloth, so that he cannot see the water, will accomplish the result. If his dislike has been caused by having been put at some previous time into a bath which was too hot or too cool, let him dabble in the water first with his hands and feet until he is reassured. Sometimes the baby will cease his objections to the bath if his face is not washed until after the tub bath is over. Force or harshness is worse than useless in this as well as in other matters in the training of the baby. The same result may be accomplished if the baby is induced to the desired action by pleasant means and his sensitive nervous system is not upset.

Cool baths.—The temperature of this bath may be gradually lowered until it is down to 96 degrees for a baby of 6 months and for one of 1 year of age. Toward the end of the second year a robust baby may be given a cool sponge, but he should never be frightened or chilled in administering this wholesome treatment. He should be gradually accustomed to it by being allowed to stand in his tub at the end of his daily bath with his feet in the warm water, while a sponge of cooler water is squeezed over the throat and chest. The water may be made colder by degrees until he is taking it quite cool and enjoying it. He must be rubbed quickly and thoroughly all over once until the skin is red and glowing. If this reaction does not come or if the child shows any appearance of chill or has cold hands and feet two or three hours after the bath the treatment must not be repeated. Provided the glow always comes, a quick cool sponge douche or shower at the end of the bath is one of the best tonics that can be found and induces an excellent habit for after life. After a cool bath the child should always have vigorous exercise for a few minutes in order to promote the necessary reaction.

Salt.—Use half a teacupful of common or sea salt to each gallon of water. The salt should be dissolved in a cup of warm water to prevent the sharp particles from pricking the skin. The doctor sometimes orders a salt bath.

Starch.—Add a cupful of ordinary cooked laundry starch to a gallon of water.

Soda.—A soda bath requires two tablespoonfuls of ordinary baking soda to a gallon of water, dissolving it in a little water before adding it to the bath.

Bran.—Make a cotton bag of cheesecloth or other thin material, 6 inches square. Fill loosely with bran. Soak the bag in the bath water, squeezing it frequently until the water becomes milky. Starch, soda, and bran baths are often used in place of the ordinary soap-and-water bath when the skin is inflamed, as in chafing or prickly heat.

Sea bathing.—Although a baby under 2 years should not be given a sea bath, a word of caution about sea bathing for young children may not be amiss. The cruelty with which well-meaning parents treat young, tender children by forcibly dragging them into the surf, a practice which may be seen at any seaside resort in the summer, can have no justification. The fright and shock that a sensitive child is thus subjected to is more than sufficient to undo any conceivable good resulting from the plunge. On the other hand, a child who is allowed to play on the warm sand and becomes accustomed to the water slowly and naturally will soon learn to take delight in the buffeting of the smaller waves, but he should not be permitted to remain more than a minute or two in the water, and should be thoroughly dried, dressed immediately, and not left to run about the beach in wet clothing.

HOW TO LIFT THE BABY.

To lift a young baby, slip the left hand under the back beneath the shoulders, spreading the fingers in such a way as to support the neck and head, and lift the feet and legs with the right hand. Never lift the child without thus supporting the spine. When a baby has learned to hold up his head and has gained considerable strength in the muscles of the back and neck, he may be lifted by grasping him with outspread fingers under the armpits, the body held firmly, so that the entire strain does not come on the shoulders. A baby should never be lifted by the arms. It is possible to dislocate the shoulder joint by careless lifting.

HIGH CHAIR.

A baby should not be put in a high chair until he is quite well able to hold the spine and head erect, and should never be left in such a chair for any length of time. There is grave danger of producing a deformity of the spine if a baby is forced to maintain a rigid sitting position for long periods before bones and muscles

are sufficiently developed. Mothers should be on their guard to prevent the possibility of the baby being fastened in a high chair and left there to take care of himself during her absence, as maids and nurses may resort to this neglectful method of caring for the baby at such times.

TOYS.

Since a baby wants to put everything in his mouth, his toys must be those that can safely be used in this way. They should be washable and should have no sharp points nor corners to hurt the eyes. Painted articles and hairy and woolly toys are unsafe, as are all objects small enough to be swallowed, and those having loose parts such as bells and the like.

A child should never have so many toys at one time as to distract his interest. He will be quite satisfied with a few things for the time being, and a handful of clothespins, for example, will often please just as much as an expensive doll or other toy. It is an excellent plan to have a box or basket in which to keep empty spools and other household objects which the baby may play with.

CARE OF THE SPECIAL ORGANS.

Eyes.—Whether the young baby is awake or asleep, his eyes should always be shielded from strong light, either sunlight or artificial, and from dust and wind. Care should be taken not to allow any soapy water to enter the baby's eyes in bathing. Swelling, redness or any discharge should have medical attention at once.¹

Mouth.—A healthy baby's mouth needs no cleaning before the teeth come. The saliva is a sterilizing fluid, intended to keep the mouth healthy, and it is possible to injure the delicate tissues by attempting to clean them with a cloth. If the mouth must be washed a swab made by twisting a piece of sterile absorbent cotton on the end of a clean stick should be used. Dip this in warm boiled water and wipe the gums very carefully. Never put a finger inside the baby's mouth unless in an emergency. (See "Care of the teeth," p. 54.)

Ears.—Wash the external ear with a soft rag, but never attempt to introduce any hard instrument inside the ear to clean it. Always dry the ears and creases back of them very carefully.

Nose.—The baby's nose should be cleaned as a part of the daily toilet in the same way as the ears. When the baby has an infectious cold he should have special attention. (See "Cold in the head," p. 68.)

Genital organs.—These organs in both sexes should be kept scrupulously clean, with as little handling as possible. Boys should be

¹ See "Care of the eyes," Prenatal Care, p. 30.

examined by a physician to see whether or not circumcision is needed. The foreskin should frequently be drawn back at bathing time and the organ cleansed. If the mother finds it difficult to retract it, she should not attempt to do this alone, but should ask the doctor to show her how. Perfect cleanliness is the principal treatment required in girl babies. If nervous symptoms appear the baby should be examined by a physician. Any swelling or redness of the parts or a discharge, however slight, should be brought at once to the doctor's attention.

FEEDING.

PROCESS OF DIGESTION.

In order to comprehend the principles which underlie the proper feeding of infants, it is well to understand what is involved in the process of digestion and what food elements are needed for the growth, maintenance, and repair of the body.

Digestion is the process or series of processes by which the food eaten is changed into the forms in which it can be absorbed by the tissues of the body. This is a most intricate operation, involving the use of many organs and functions, but one which takes place without difficulty in the healthy human body. But since all the complicated machinery necessary for digestion must be started at once, and since, necessarily, the organs of a newborn baby can be but feeble, it stands to reason that the food presented to them must be especially adapted to them. This food must be liquid; also it must contain the five essential elements which the human body requires for growth, namely, the fats and sugars and starches, which furnish the necessary heat and energy; the proteins, or muscle-forming foods; the mineral salts needed for the growth of all tissues; and, lastly, a great amount of water. All these are found in milk, and in no other food which the infant is capable of digesting. Therefore milk is the one proper infant food.

BREAST FEEDING.

The milk necessary for the normal healthy growth of every infant mammal, including the human species, is created for it in the breast of its mother. The milk of the cow, mare, ass, goat, and other animals has been analyzed by many investigators, to see whether any one of them bears so close a resemblance to human milk that it may be used as a substitute. All these investigations show that the milk of each animal is different from that of every other and each is especially adapted to the requirements of the young of that species. No other argument than this simple physiological one should be needed to induce a thoughtful mother to nurse her baby at the beginning of his life, but if further demonstration is needed the evidence

on every hand of the comparative failure of artificial feeding, at least as far as young babies are concerned, should be convincing.¹

Statistics gathered from this country and many others show that breast-fed babies have a much greater chance for life than those who are bottle fed, and also that the infant illnesses, not only those of the digestive tract but many other varieties, afflict bottle-fed infants much oftener and much more seriously than those who have breast milk. But not only does breast milk protect the nursing baby from illness and increase materially his chance for life, but practically insures that his development shall proceed in a normal orderly fashion.

The body makes a greater proportional growth during the first year of life than during any other, and the brain increases more in the same time than in all the rest of the years of life put together. It is therefore of the utmost importance to the whole existence of each individual that during this most critical period the baby be surrounded with all possible conditions for perfect health. The most important of these conditions is breast milk. Food is the one question of overwhelming importance to the baby. If the food is one to which the digestive apparatus must learn to accommodate itself, or one which is lacking in some of the elements necessary for growth and development, the natural processes are hindered, and if illness comes they are seriously interfered with, sometimes to an extent which makes it difficult, if not impossible, for the baby entirely to regain the lost ground. To accustom the infant organs to do their work properly at this critical, formative time is essential to the health of the adult in no small degree. Undoubtedly in many cases grown people would have escaped many of the defects and deficiencies with which they have to contend if they had passed the period of infancy in perfect health.

These are the impelling reasons why mothers should nurse their babies. Other less important reasons are that if the mother takes care of the baby herself it is much easier to nurse than to feed by bottle; that breast milk is practically free from disease germs, and that it is fed to the baby at a uniform temperature from beginning to end of the nursing.

NURSING MOTHER.²

The majority of mothers can nurse their babies, at least in part, if they have suitable care and advice. What is chiefly required is that this conviction should enter the mind of the mother and abide there; for the fear that she will not be able to perform this function, or that the milk will not or does not agree with her child

¹ See Prenatal Care, pp. 32-35, for consideration of breast feeding as affected by prenatal conditions.

² See Prenatal Care, pp. 32-35.

has more to do with the supposed inability to nurse than any other one factor. The gland which secretes maternal milk is a wonderful and delicate mechanism. So intimate is the connection of the mammary nerves with the mind that the mental states of the mother are readily reflected in their function. Fear, anger, or worry may serve to check the secretion of the milk, or to change its quality so much that, for the time being, it is unfit for use, while, on the other hand, a calm mind, joy, laughter, and delight in life, coupled with the desire and intention to nurse the baby, will make it possible to do so. Failing this spirit, all other measures may prove futile.

The secretion of milk is induced by the efforts of the baby to nurse, and therefore he should be put to the breast regularly for at least two weeks after birth, even if only a very little milk is secreted. This patient effort, with proper food and care, coupled with the determination to succeed, will usually result in a good supply of milk, and no physician or nurse who appreciates the value of breast milk for the baby will counsel another course. It is rarely true that the mother's milk does not agree with the baby. It is much more often deficient in quantity than in quality. The return of menstruation may lead to a slight temporary disturbance, but is not a sufficient cause for weaning.

Diet.—A nursing mother should have a light, abundant, and appetizing diet, and such a one as causes her no indigestion. Disturbances in the digestive tract of the mother are quickly reflected in the baby's condition, and therefore the mother should refrain from eating or drinking those things which she knows from experience she can not digest. As a rule, indigestion in the mother, which shows itself in constipation, eructations of gas, headache, diarrhea, and the like, is caused by such foods as heavy puddings or underdone pastry; doughnuts; fried food soaked in fat; made dishes, such as croquettes and fritters; pickles, mincemeat, baked beans, pork and cabbage, and other heavy or poorly cooked foods; but people differ greatly in their power of digestion, and what will suit one person may upset the next. Overeating may be a cause of indigestion.

A mixed diet of such digestible and nutritious foods as are readily available is desirable for the nursing mother. All foods are milk-making foods. The foods selected will differ widely according to circumstances, but will usually include vegetables, ripe fruits, meat, poultry and fish, with oysters and the like, eggs, milk, cheese, farinaceous foods of all kinds (cereals, flour, meals, etc.), breads, especially graham, whole wheat, corn meal, and bran, and simple desserts. Occasionally acid fruits, vegetables, and spices eaten by the mother may cause some disturbance in the baby, and in such cases they should be avoided.

Constipation is to be most carefully avoided, by eating bread¹ and other laxative foods. Drugs should be taken as little as possible, and only on the doctor's advice. Tea and coffee may be taken in moderation, not more than one cup of each a day. Alcoholic drinks of all sorts are better avoided. One quart of milk should be taken each day. Six to eight glasses of good drinking water each day are required, one or two of which should be taken on rising to encourage the action of the bowels.

Exercise.—In order that a healthy nursing mother may be able to eat and digest a generous supply of food materials, exercise in fresh air is indispensable. This must be undertaken gradually, so that the woman who is not accustomed to exercise may not be overtired. A vigorous walk is one of the best of tonics, because of its effect both on the body and on the mind. Worries take flight when treated to sunshine and fresh air and leave the nervous system free to perform its normal functions. The woman who has a garden to look after or other interests which take her out of doors a good deal during the course of a day gets her exercise in the most natural way, but she will need to be on guard against overtaxing herself. No exercise should be carried on to the point of weariness, because then the nutriment which should go to make milk for the baby will be used to renew the mother's worn-out tissues.

Sleep.—An abundance of sleep is essential. The nursing mother should have at least eight hours of sleep every night and an hour or two during the daytime. A mother soon learns to rest herself whenever the baby nurses, and these brief periods of relaxation help greatly to keep her in good condition.

*Bathing.*²—A daily bath is desirable, and should be taken whenever possible. It is especially important to remove the odors of perspiration or old milk from the mother's body and clothing, as the baby may refuse to nurse when an unpleasant odor is forced upon him.

Amusements and recreation.—A conscientious young mother is very apt to defeat her own ends by staying at home too constantly and watching over her baby so incessantly that she grows pale and nervous and begins to worry, a condition which often results in depletion of the milk and corresponding disturbance in the baby. Healthy babies are better off with a judicious amount of "letting alone," and there is no reason why a mother should not be absent some part of every day if there is a responsible person to be left in charge. Out-of-door life, pleasant recreation which is not exhausting, visiting, and other diversions are essential to every nursing mother if she is to keep up an abundant supply of milk. The family, especially the husband, should realize how important it is to shield the nursing mother from *unnecessary* work and worry, and to provide her at intervals with the oppor-

¹ See "Diet for a nursing mother," Prenatal Care, p. 34. ² See "Bathing," Prenatal Care, p. 13.

tunity for rest and recreation. However, a healthy mother should not regard herself nor permit her family to regard her as in any sense an invalid at this time. She is much more likely to succeed in nursing if she goes about her ordinary duties as usual and fills her life with normal interests.

TECHNIQUE OF NURSING.

The first secretion of the breasts is called colostrum, and while not a true milk is adapted to the baby's needs in the first hours of his life. He should therefore be put to the breast as soon after birth as the mother is able to bear it. This early nursing is important to the mother because it helps to contract the uterus, and to the baby for various reasons, one of which is that he needs to learn how to draw his food before the breast fills with milk and becomes less pliant and more painful.

The mother holds the baby on her arm, drawing him to the breast in such a way that his head is comfortably supported, turning slightly toward the side she wishes to present and drawing the baby's feet and legs against her body. A pillow under the opposite shoulder is a welcome support. The baby should be able to grasp the nipple squarely. If his head is too low, the milk may flow back in his throat, making him cough and choke; but the head must be low enough so that the nostrils are not covered by the breast. It is impossible for the baby to suck properly unless he can breathe freely, and the mother should hold the breast away from his nostrils with the fingers of her free hand. When the breasts have filled, if the milk flows too fast, as sometimes happens, she may control the flow by taking the breast in her hand so that one finger is above and one below the nipple and by pressing it gently at the base. If the baby's efforts to nurse make the mother's nipples sore, they should be washed with plain boiled water or boric-acid solution before and after each nursing and may be anointed with lanolin at night, covering them with gauze or clean linen. If a crack should appear, the greatest care should be taken to prevent infecting the breast, as if this happens a painful breast abscess may result. A doctor should always be consulted. The cracked nipple should be kept constantly clean by washing it with boiled water. A glass nipple shield should be used, care being taken that it is always perfectly clean and made sterile by boiling. The shield will not materially increase the difficulty of nursing for the baby and will safeguard the mother. If the breasts become engorged, they may be relieved by using a breast pump, if necessary, or by gentle massage; but all manipulation only serves to stimulate the breast to greater activity and the less handling it can have the better. Hot or cold applications, according to the patient's preference, are useful, and a breast binder is often a great relief, but

should be applied by a physician or nurse.¹ Usually the matter right itself without difficulty as soon as the relation between the supply and demand is established. If the mother has received the proper care during pregnancy and the breasts and nipples have received attention, which is part of a doctor's duty, the nursing period will be shorn of much of its pain and trouble. In general, the nipple should be kept as clean and as dry as possible and should be washed before each nursing.

REGULARITY IN NURSING.

The baby should be nursed regularly, by the clock, from the very first and should have nothing between meals save water to drink. It takes from one and one-half hours to three hours for a baby's stomach to empty itself after a full meal of breast milk and considerably longer for the process of digestion to be completed in the intestines.

The baby should not ordinarily be allowed to remain at the breast over 20 minutes in any case, and the nipple should be withdrawn several times during the nursing, so that he will not take the milk too rapidly with consequent regurgitation and indigestion. If the milk is plentiful, the breasts should be nursed alternately, but it may be necessary to give both breasts at one feeding, in order to satisfy the baby. Do not let the baby go to sleep while nursing.

HOW OFTEN TO FEED.

Most babies thrive better if the interval between feedings is fairly long. This interval may be six hours until the milk is established. From that time the baby may be fed at three-hour intervals until he is 6 months old, when four hours should be allowed to elapse between feedings. Many babies do well if fed only once in four hours from birth. However, if the breast supply is scanty, more frequent stimulation is sometimes necessary to the success of breastfeeding.

Night feeding (after the 10 o'clock nursing) may be omitted when the child is 4 months old.

The following table shows the nursing interval and the number of feedings in 24 hours when the three-hour interval is used:²

Period.	Nursings in 24 hours.	Interval by day.	Night nursings (10 p. m. to 6 a. m.).
		<i>Hours.</i>	
First and second day.....	4	6	1
Third day to 4 months.....	7	3	1
4 to 7 months.....	6	3	0
7 to 12 months.....	5	4	0

¹ See Prenatal Care for the treatment of engorged breasts.

² The Care and Feeding of Children, 1914, L. Emmett Holt, M. D.

SUPPLEMENTARY FEEDING.

There is apt to be a time, after the departure of the nurse, when the mother is just getting about her accustomed duties and is somewhat enfeebled and worried with the care of the baby, that the supply of milk decreases. It is at this or some other later period of stress that many babies are needlessly weaned. Instead, the baby should be put to breast with unfailing persistence at regular intervals, no matter how little he gets, since every mouthful of breast milk is important to him. It is the tendency of the breasts to cease to secrete milk when suction is discontinued, and it is essential to a continuance of the supply that it be constantly drawn upon. The mother should be encouraged to eat more nourishing food, such as milk, cream, eggs, meat, and good bread, and to take a larger amount of fluid food. Raw eggs beaten up and added to milk agree well with many persons. Even if the amount of milk diminishes until the baby gets little or none, it may often be reestablished by patient and constant effort, provided the mother does not worry, but rather strives in every way to build herself up by good food, out-of-door life, and pleasant surroundings, in all of which she should have the help of her family. Meanwhile the baby must be given additional food.

WHAT TO FEED.

This supplementary food should be cows' milk, adapted to the age of the infant, given by bottle, using a nipple with a very small hole lest the baby, finding it easier to nurse the bottle, will not suckle the breast with sufficient vigor to give it the required stimulation.

HOW MUCH TO FEED.

In order to determine how much breast milk he is getting, and therefore how much supplementary food is needed, the baby should be weighed, without making any change in the clothing, before and after each nursing in 24 hours and the results carefully set down. At the end of this period it will be possible, by adding the various amounts together, to see exactly how much milk the baby has had and from this to determine to what extent the mother's milk needs to be supplemented. In this situation the help and care of a good doctor are especially needed.

The scales should be similar to grocer's scales, having a pan or basket in which to lay the baby, and should weigh to one-half ounce. Spring scales are not sufficiently accurate for this purpose.

WEIGHT.

In order to determine how the baby is thriving, it is necessary to weigh him at stated intervals and compare the results. The average

baby weighs about 7 pounds at birth, boys being slightly heavier than girls. A healthy baby may weigh as little as 5 or 6 pounds as much as 10 or 12 pounds, but these weights are unusual. A slight falling off in weight occurs during the first few days or the first week of life, amounting to a few ounces or as much as a pound, but this loss is promptly regained in from 4 to 10 days, and from that time the baby should show a constant gain in weight. During the first month the daily gain should average about three-fourths of an ounce; at 7 months, about one-half ounce a day; and at 1 year, one-fourth of an ounce a day. The average baby gains about 1½ pounds a month for the first six months and one pound a month from 6 months to the end of the first year, doubles its weight at about 5 months, and trebles it at the end of the first year. A diminution in weight demands careful attention. If there is a loss in weight, and especially if it is accompanied with other symptoms of illness, a good doctor should be consulted at once. If these conditions occur in the heat of summer, the physician will make any change in the food with very great caution, taking pains not to increase the food to the extent of producing diarrhea.

A very rapid increase in weight is not to be desired. The ideal of baby feeding is not to produce a fat baby, but rather a proportionately nourished one. It is comparatively easy to grow fat, but it is a harder and slower process to grow muscle, bone, blood, and nervous tissue. The majority of mothers feel that if they have a fat, rosy-cheeked baby it is evidence they are giving the best sort of care, but this is not always true. Some of the well-advertised infant foods produce just this kind of babies, but the later development shows that the food was deficient in some of the important elements needed for the symmetrical development of all parts of the body, and weakness of some part or some later deficiency of health may be the first indication that such babies were not properly fed. A perfectly healthy baby does not have the outlines of his muscles obliterated by weight and cushions of fat. He is alert, springy. The flesh is hard to the pressure, not soft and flabby. His color is pinkish, save when the cheeks have been reddened by the cold or heat. A leading English authority on infant care declares that in his opinion "it is practically impossible for any infant to put on more than 6 or 8 ounces of good nitrogenous tissue in one week, and very few can put on as much." Bottle-fed babies should be watched with particular care as to their weight in summer. It is better to have little or no gain during excessive heat than to upset the digestion by overfeeding designed to keep the baby gaining.

¹ Eric Pritchard, M. D., *Infant Education*, London, 1907, p. 18.

HOW TO WEIGH THE BABY.

Undress the baby completely. Put a soft cloth in the pan of the scales, and lay the baby on it; or wrap the baby in a blanket, if the room is not warm. Weigh carefully and write down the result. Remove the baby, weigh the blanket or cloth, and subtract this amount from the first weight.

When weighing the baby before and after nursings to determine the amount of breast milk he is receiving, do not undress him, but weigh both times in exactly the same clothing. If the diaper becomes wet or soiled meantime, do not change it until after the weight has been taken.

ARTIFICIAL FEEDING.¹

The term "artificial feeding" refers, in common acceptance, to the method of feeding which must be employed when a baby is, for any reason, denied breast milk, because any other method of feeding a young baby than at its mother's breast is truly artificial.

MILK.

Wide experience has shown that fresh cows' milk is the best substitute for breast milk. This milk should be the purest and cleanest possible; it should be the product of a tuberculin-tested herd, one that is healthy, well fed, properly housed and cared for, and milked by clean milkers into sterilized utensils. The milk should be bottled and cooled at the dairy and delivered to the consumer in sealed bottles. The milk commonly sold from open cans, known as "loose" or "dipped" milk, should never be given to a baby.

Certified milk.—In certain places it is possible to obtain what is known as "certified" milk, which is fresh, clean, pure, normal milk of uniform composition and highest quality obtained from healthy cows and produced and handled under the supervision of a medical milk commission, with special sanitary precautions. Although the amount of certified milk is as yet far too small, the demand for it is steadily increasing. As soon as mothers become convinced of the infinite advantage of having a supply of raw milk whose quality is guaranteed they are quite ready to pay the additional cost. This milk averages to cost about 16 cents a quart; but compared with the cost of the illness due to the use of unclean milk, this is not to be considered. There can be no doubt that the use of certified milk has been a great factor in the reduction of deaths from infantile diarrhea in recent years. The American Association of Milk Commissions publishes literature on the subject. The secretary may be addressed at the Ortz Building, Cincinnati, Ohio.

¹ See also "Care of the baby," Supplement to Public Health Reports No. 10, 1913.

step in the sun, nor in a warm kitchen, but should be put in the ice box as soon as it is delivered. It must be kept covered, protected from dust and flies, not left standing in shallow, open pans nor put into the refrigerator in pitchers or open dishes, as it is very readily contaminated by other foods. Milk should be kept in glass jars or bottles which are made sterile by boiling before being filled. If the milk is sour, or shows a sediment in the bottom of the bottle, it is not fit to give to the baby.

*A homemade ice box.*¹—An ice box as illustrated,² which will serve to keep the baby's feedings cold for 24 hours, can be made at home for very small cost, as follows: Procure a wooden box about 18 inches square the same depth; put a layer of sawdust 3 inches thick in the bottom of the box; fill in with sawdust around a 10-quart tin pail or a section of 10-inch galvanized pipe which occupies the middle of the box. Inside this pail or pipe place another slightly smaller pail, which is to hold the ice and the bottles. This inner pail should be covered, and the outer box tightly closed by a wooden cover lined with several thicknesses of newspaper. The inner pail should be taken out each morning to be emptied and cleaned. This little device will keep cool with 5 cents' worth of ice for 24 hours or even longer. When feeding time comes, the box is opened, one bottle is taken out, and the box is quickly closed again.

HOW TO FEED THE BABY.

WHAT TO FEED.

Leading authorities differ so widely on various points connected with this subject that no directions can be given which will meet with general agreement. A few of the fundamental points are given here, but whenever possible the mother should confer with a good doctor regarding an artificially fed infant.

The only proper artificial food is cows' milk, suitably modified to suit the child's age and development. Some babies have peculiarities, and with them rules can not be closely followed; but with most, if proper rules are followed from the outset, there will be comparatively little trouble. The advice of a good doctor should be sought and followed. It is most unwise for the mother to experiment with different foods or different mixtures, or to try to feed her baby by the advice of her neighbors.

Whenever there are signs of indigestion, such as vomiting or frequent loose stools, the mother should dilute the food, or omit it altogether, giving nothing but a little plain boiled water until the doctor sees the baby.

¹ See Appendix for Farmers' Bulletin on homemade ice box.

² Courtesy of the Committee on Infant Social Service of the Women's Municipal League of Boston.

The following directions for feeding the baby have been prepared by a committee of the American Medical Association.¹

Beginning on the third day, the average baby should be given 3 ounces of milk daily diluted with 7 ounces of water. To this should be added 1 tablespoonful of lime water and 2 level teaspoonfuls of sugar. This should be given in seven feedings.

At 1 week the average child requires 5 ounces of milk daily, which should be diluted with 10 ounces of water. To this should be added $1\frac{1}{2}$ even tablespoonfuls of sugar and 1 ounce of limewater. This should be given in seven feedings. The milk should be increased by one-half ounce about every four days. The water should be increased by one-half ounce every eight days.

At 3 months the average child requires 16 ounces of milk daily, which should be diluted with 16 ounces of water. To this should be added 3 tablespoonfuls of sugar and 2 ounces of limewater. This should be given in six feedings. The milk should be increased by one-half ounce every six days. The water should be reduced by one-half ounce about every two weeks.

At 6 months the average child requires 24 ounces of milk daily, which should be diluted with 12 ounces of water. To this should be added 2 ounces of limewater and 3 even tablespoonfuls of sugar. This should be given in five feedings. The amount of milk should be increased by one-half ounce every week. The milk should be increased only if the child is hungry and digesting his food well. It should not be increased unless he is hungry, nor if he is suffering from indigestion even though he seems hungry.

At 9 months the average child requires 30 ounces of milk daily, which should be diluted with 10 ounces of water. To this should be added 2 even tablespoonfuls of sugar and 2 ounces of limewater. This should be given in five feedings. The sugar added may be milk sugar or if this can not be obtained cane (granulated) sugar or maltose (malt sugar). At first plain water should be used to dilute the milk.

At 3 months, sometimes earlier, a weak barley water may be used in the place of plain water; it is made of one-half level tablespoonful of barley flour to 16 ounces of water and cooked for 20 minutes.

At 6 months the barley flour may be increased to $1\frac{1}{2}$ even tablespoonfuls cooked in the 12 ounces of water.

At 9 months the barley flour may be increased to 3 level tablespoonfuls cooked in the 8 ounces of water.

Sugar is added to the food not to sweeten it but to furnish a necessary foodstuff. Physicians differ as to the best sugar for use in infant feeding. Malt sugar gives very good results, and several preparations which contain dextrin as well as maltose are on the market, but are expensive. Milk sugar is also expensive, and some physicians believe that it has a greater tendency to upset the baby. Cane sugar is the cheapest form of sugar, and many babies seem to digest it very well. One objection to the use of cane sugar is that the baby quickly becomes accustomed to the sweet taste, making it difficult later to induce him to eat unsweetened foods.

AMOUNT OF FOOD.

The following table from Dr. Holt's book shows the amount of food required by the average healthy baby at the given ages and the proper interval between feedings:

¹ Save the Babies, prepared for use in Baby Health Conferences for the Committee on Public-Health Education Among Women, by Drs. L. Emmett Holt and Henry L. K. Shaw. Council on Health and Public Instruction, American Medical Association.

Schedule for feeding healthy infants during the first year.¹

Age.	Interval between meals by day.	Night feedings (10 p. m. to 7 a.m.).	Number of feed- ings in 24 hours.	Quantity for 1 feeding.	Quantity for 24 hours.
	<i>Hours.</i>			<i>Ounces.</i>	<i>Ounces.</i>
Second to seventh day.....	3	1	7	1½-2½	10-17
Second and third weeks.....	3	1	7	2-4	14-28
Fourth to ninth week.....	3	1	7	3-4½	21-31
Tenth week to fifth month....	3	1	7	3½-5	24-35
Fifth to seventh month.....	3	0	6	4½-6½	27-39
Seventh to twelfth month....	4	0	5	6½-9	33-45

The interval is reckoned from the beginning of one feeding to the beginning of the next. Large children with strong digestion may take the larger quantities, while small or weak infants should take the smaller amounts. If the baby either habitually regurgitates his food or leaves some milk in the bottle each time, the interval between feedings should be increased.

A simple rule² for feeding the average healthy baby is to give 1½ ounces of milk in 24 hours for every pound of body weight. To this is added the sugar and diluting fluid as directed for the given age. Thus a baby weighing 10 pounds will take 15 ounces of milk in 24 hours, increased by the necessary sugar and fluid.

PREPARATION OF THE FOOD.

Everything that is to be used in the preparation of the baby's food, including the hands and clothing of the mother or nurse, must be absolutely clean. To clean the utensils they should be boiled in the large kettle for 15 minutes just before using.

Utensils.—Enameled ware or aluminum utensils are the safest kind to use, since they are most readily kept clean. They should be used exclusively for this purpose. The following articles will be found convenient:

As many nursing bottles as there are feedings in one day.

A nipple for each bottle.

A new clean cork stopper for each bottle.

A bottle brush.

A graduated measuring glass.

A 2-quart pitcher.

A funnel.

A long-handled spoon for stirring the food.

¹Care and Feeding of Children, L. Emmett Holt, M. D., 1914.

²Infant Feeding, Clifford G. Grulee, M. D., 2d ed., p. 148.

drops rapidly. If the hole is large enough so that the milk runs in stream, the baby will take his food too fast.

Care of nipples.—Nipples need special care. If allowed to soak in water when not in use the rubber quickly becomes spongy and disintegrates, the hole grows larger and larger, and the nipple is soon unfit for use.

Immediately after the feeding remove the nipple and rinse with cold or warm (not hot) water. Rub the outside with a little common salt to remove the milk, turn the nipple inside out, rinse, and rub with salt; rinse again and boil for five minutes. The nipple will dry once when removed from the boiling water. Place in a dry glass jar which has been boiled and screw the cover on tight. Keep from the light. The nipples should be rinsed in boiled water just before using.

It is wise always to have extra nipples prepared, as they are subject to many accidents.

How to prepare the feedings.—Take the milk bottle out of the ice box, rinse with boiled water, and wipe the top with a clean towel. Next remove the paper cap with the fork which has just been boiled. Then pour out enough milk for the day's feedings, measuring the amount in the glass graduate, and empty it into the pitcher. Measure the required amount of water (using cold boiled water) in the same way and add to the milk. Measure the sugar and limewater; add these to the milk and water and stir well. Then take as many bottles as there are to be feedings in 24 hours, and fill them exactly to the proper depth according to the scale blown in the bottle. If the materials have been carefully measured, the bottles will be filled to equal depth. Close with new, clean bottle corks in preference to wads of cotton, and pasteurize or sterilize the feedings thus prepared in accordance with directions that follow.

Pasteurizing.—This process consists in heating the milk to 150 degrees, holding it there for some time, and then cooling it rapidly to 50 degrees. The use of one of the excellent pasteurizers and sterilizers in the market greatly simplifies this part of the work, but satisfactory results can be attained by the use of an ordinary pail or kettle. A convenient method for home pasteurizing is as follows:²

Put a gallon (4 quarts) of water on the stove in a kettle. When the water is boiling hard, remove the kettle from the stove to a table and allow it to stand uncovered for 10 minutes; then put the filled and loosely corked bottles into the water, cover the kettle, and allow it to stand covered for half an hour. At the end of this time remove the bottles, cool rapidly under running water, and put in the ice box until needed. Do not uncork the bottle from the time it is first closed until the baby is to be fed.

¹ Adapted from *Feeding and Care of Baby*, New Zealand pamphlet, 1913.

² Method supplied by Miss Rena P. Fox, superintendent Babies' Hospital, Philadelphia.

NORMAL FEEDING.

If the baby has been breast fed for a while and is then put on cow milk, it is wise, until he has become somewhat accustomed to the new food, to use a weaker mixture at first than the one indicated for the age. The food can be strengthened every few days if necessary until it suits his age. If the baby shows any signs of disturbed digestion it is wise to return at once to the weaker food until he is quite well again; if he seems satisfied, is gaining from 4 to 6 ounces a week, does not vomit, and has normal stools, it is reasonably certain that the food is of the right strength and quantity.

UNDERFEEDING.

As a rule, babies are overfed rather than underfed. But if the baby cries as soon as the bottle is taken away, and again before the next feeding time, a careful increase may be made day by day toward a stronger mixture, stopping at a point where he is satisfied.

OVERFEEDING.

If the baby sleeps restlessly, vomits his food, or has loose bowel movements, it usually indicates that he is being fed too much, too often, or that his food is stronger than he can digest. If the baby is breast fed, the interval between nursings should be lengthened to 4 hours, as a first measure. It is wise to see the doctor, when possible. For bottle-fed babies the amount of the day's feeding may be decreased by using one-half of the usual contents of each bottle until the disturbance has subsided. (See "Diarrhea," p. 64.)

PROPRIETARY FOODS.

These foods may be classified into those made upon a milk basis and those made upon a cereal basis. Or they may be grouped so as to show which are intended to be added to fresh cows' milk after they have been mixed with water, and which are intended to be mixed only with water. They might also be divided according to their composition, showing which are high in sugar or in insoluble starch or deficient in fats. An analysis of the entire subject is now being carried on by the Bureau of Chemistry of the Department of Agriculture, and this report, when available for distribution, will be of great value to all those interested in the matter of infant feeding. The general consensus of opinion among authorities seems to be that one or another of these foods may be temporarily used when fresh cows' milk is not available for any reason, as in traveling, or in the Tropics, but that their continued and exclusive use is to be condemned. All are expensive, and many of them do not give the baby the required food elements nor the proper proportions of these elements, while the use of some of them is known to be followed by various forms of illness.

feeding, beginning about the ninth month. If the baby is delicate, it may be begun as early as the fifth month in half the above quantity.

Only one new article should be added to the baby's diet at a time and the effect on the baby should be carefully noted. (See p. 80 for preparation of vegetables.) Meat should be boiled, roasted, or broiled for the baby and must be cut in fine pieces, as the baby will not chew it sufficiently at this age.

Never give the baby cakes, candy, doughnuts, pastry, fresh breads, griddlecakes, sirups or molasses, pork or tough meat of any kind, bananas or any overripe fruit, pickles, tea, coffee, soda water, wine, cider, beer, nor tastes of the family meals. If this is begun he will soon demand a taste of everything he sees, and his appetite for the simple diet which is essential at this age will be quickly destroyed.

INFANT FEEDING IN THE TROPICS.

Because of the scarcity of cows' milk it has heretofore been customary to depend largely upon the use of condensed milk, both sweetened and unsweetened, for infant feeding in tropical climates.

Dr. Victor G. Heiser, Director of Health for the Philippines, is authority for the statement that experience in the Philippines has demonstrated the value of natural sterilized milk. This natural milk is now very extensively prepared in Switzerland, Italy, and Denmark, and is exported in cans of various sizes adapted to special uses. This canned milk keeps perfectly sweet for months and has proven a very satisfactory substitute for the ordinary milk supply. It is used in the same way as natural cows' milk would be used in the Temperate Zone.

A series of experiments in infant feeding which have been carried on at the Ancon Hospital in the Canal Zone since 1906 have resulted in the evolution of a method of infant feeding involving the use of both sweetened and unsweetened condensed milks. A set of formulas is published and distributed by the Department of Sanitation of the Zone.

INFANT STOOLS.

The first passages from a newborn baby's bowels are known as meconium. The excretion is black or nearly so, and is thick, of a tarlike consistency, with little or no odor. This soon changes to the normal yellow stool of the healthy infant as the baby begins to feed at his mother's breast. The stools are then of a dull yellow or orange color without disagreeable odor and soft and mushy in appearance. They are passed from one to three times a day, averaging twice a day in most breast-fed babies until 6 months of age, when one stool a day is usual. When there is a long interval between

feedings the number of stools is usually lessened, being only one a day, and sometimes only one in 36 hours. Artificially fed infants usually pass but one stool a day, and the color and odor vary with the character of the food. With breast-fed babies the stool is a mass, while with those fed on the bottle there is more tendency to a "formed" stool.

When there is a greatly marked difference in the character of the stools, especially when the number increases, the mother should have a doctor see the baby, meanwhile decreasing the food or, better, withdrawing it altogether for some hours, giving water instead.

In order to do away with the need for diapers as early in life as possible, the baby should be taught to use the chamber. This training may be begun by the third month, or even earlier in some cases. It should be carried out with the utmost gentleness, since scolding and punishment will serve only to frighten the child and to destroy the natural impulses, while laughter will tend to relax the muscles and to promote an easy movement. In order to be effective, the chamber must be presented to the baby at the same hour every day, usually just before the morning bath, and it must be presented persistently each day until the habit is formed. Much time and patience will be required on the part of the mother, but in the end the habit thus formed will be a great saving of trouble to her and of untold value to the child, not only in babyhood, but throughout the whole of life.

Experience has shown that an ordinary porcelain cuspidor is an excellent vessel to use for a young baby. It should be kept scrupulously clean and in cold weather must be warmed before being used. The mother takes the vessel in her lap, seating the baby upon it with his back toward her breast, so that she may support him in a comfortable position. If the movement does not come within a few minutes the better course is to wait until the next day. A little observation on the mother's part will lead her to know at what hour the baby's bowels are ready to move, and she should choose that moment for the trial. If the baby has a tendency to be constipated, it may be well to introduce a well-oiled soap stick for a moment before beginning, in order to start the movement and to indicate to the baby what is wanted.

THE NORMAL BABY.

DEVELOPMENT.

An inexperienced mother is often greatly at a loss to know whether a baby is properly thriving or not, and may be unduly alarmed at small matters, or may not understand the serious nature of certain conditions. It may be helpful to mention the leading characteristics

of a normal, healthy baby, and the mother may assume the lack of these conditions to show that temporarily or otherwise the baby is not in perfect health:

A steady gain in weight.

Bowel movements of the normal number, color, and consistency.

Absence of vomiting or regurgitation of the food.

A good appetite.

A clear skin.

Bright, wide-open eyes.

Alert, springy muscles, which respond readily to any stimulus.

A contented expression.

Very little crying.

Quiet, unbroken sleep, with eyes and mouth tightly closed.

No evidence of pain or discomfort.

A constant growth in stature and intelligence.

Other points in a normal development are:

The soft spot in the top of the head begins to close at 14 months and should be entirely closed at 2 years.

The baby learns to hold up his head, unsupported, during the fourth month.

He laughs aloud from the third to the fifth month.

He reaches for toys and holds them from the fifth to the seventh month.

At 7 or 8 months he is usually able to sit erect and hold the spine upright.

During the ninth and tenth months he makes the first attempts to bear the weight on the feet, and can usually stand with assistance at 11 or 12 months.

He begins to walk alone in the twelfth and thirteenth months and walks alone at the fifteenth or sixteenth month.

At 1 year usually a few words can be spoken, and at the end of the second year the baby makes short sentences.

Children differ in the rapidity of their development, some being slower and some faster; therefore the mother should not be unduly alarmed at variations from this statement, although marked differences should put her on guard.

TEETH.

The embryonic teeth begin to develop at least six months before birth. It is probable that a nutritious diet for the prospective mother lays the foundation for healthy teeth in the baby and that lack of proper food for the mother may deprive both her own and the baby's teeth of some part of their normal vigor.¹ Every child has two sets of teeth. The first set, known as the deciduous or "milk" teeth, are replaced, beginning at about the sixth year, with the permanent or "second" teeth. Nearly all so-called "teething" troubles belong

¹ See Prenatal Care, pp. 8, 9, "Diet in pregnancy."

to the first period, as a disturbance is rarely connected with the coming of the permanent set.

At birth each tiny tooth of both sets lies partly embedded in a cavity of the jawbone, surrounded with and covered by the softer tissues of the gum. As the baby grows, the teeth grow also, and if the baby is healthy they are ready to cut through the gums, beginning at about the seventh month of life. There are 20 of the milk teeth, 5 in each half jaw. The teeth appear in groups. There are five of these groups, with intervals between their appearance. After the first group there is a pause of five to eight weeks; after the second a pause of one to three months; after the third, one of from two to three months; after the fourth, one of from two to four

PLATE XIII.¹

Lower jaw.

- 1, First incisor, 6 to 9 months.
- 2, Second incisor, 12 to 15 months.
- 3, Canine or "stomach," 18 to 24 months.
- 4, First molar, 12 to 15 months.
- 5, Second molar, 24 to 30 months.

Upper jaw.

- 1, First incisor, 8 to 12 months.
- 2, Second incisor, 8 to 12 months.
- 3, Canine or "eye," 18 to 24 months.
- 4, First molar, 15 months.
- 5, Second molar, 24 to 30 months.

months. Thus, by the time a baby is 1 year old it may have 6 teeth; at 1½ years there should be 12; at 2 years, 16 teeth; and at 2½ years the entire set should be cut. There is considerable variation, both as to the order in which they appear and in the time, so that the mother need not be alarmed if her baby does not follow the average as above stated, but if the baby has no teeth at the end of the first year it can hardly be said to be developing properly. Probably the diet is at fault, or some disease is retarding the growth of the baby in general. In such a case the doctor should be consulted.

Deciduous or "milk" teeth.—The above illustrations, with the appended notes, show the position of the teeth in the mouth, their names, and the approximate times of their appearances.

This set of teeth is replaced by the permanent set, beginning about the sixth year. A child should be taken to the dentist at this time, if, as sometimes happens, the milk teeth are so firm that they do not

¹ Courtesy of Dr. Kent Beattie.

fall out, but, remaining in the jaws, crowd back the second set and cause them to come in misshapen and irregular.

Growth.—During the second year the baby should have more or less dry hard foods on which to chew. There is sometimes a tendency to keep a baby too long on an exclusively soft diet for fear that solid food will upset him, but it is important to the development of strong, healthy teeth that they shall have exercise in biting and chewing. Begin by giving the baby of about a year of age some dry, hard crust or toast, or hard crackers, at the end of a regular meal. During the second year, other kinds of food requiring chewing may be gradually added to the diet list and taken as part of the regular meals.

Care.—It is generally believed that much of the health of the second teeth depends upon the care that is given to the first set. As soon as the molars make their appearance they should be gently cleaned each day with a soft brush. As the baby grows into childhood he should be taught the daily care of his own teeth.

Ailments of teething.—Altogether teething is a natural process and is not alone responsible for all the illness attributed to it, nevertheless there is no doubt that many babies suffer severely while cutting their teeth. When the gums are red and swollen it sometimes affords relief if they are lanced, and it may be well to have a doctor examine the baby's mouth to see if the operation is needed. The process of teething is occasionally associated with digestive disturbances. The number of stools may increase and vomiting may occur. The baby may be restless and fretful and try continually to bite on something. In all these cases the quantity and strength of the food should be reduced and drinking water should be offered at frequent intervals. No teething lotions nor medicines of any kind should be given for the relief of the pain of teething. If they do relieve it, it is probably because they contain opium in some form or other narcotic drugs.

There is a dangerous tendency to attribute to teething many ailments which are due to other causes. The teeth begin to appear at about the same time that the baby is being weaned and new foods are being tried. Disturbances of the digestive tract are very likely to occur for these reasons. If the baby cuts his teeth in the summer, his illness may be due to excessive heat, to improper feeding or overfeeding, and to the pain of cutting the teeth, and it would be difficult to say which factor is chiefly responsible. In any case, careful feeding is of the utmost importance.

The baby should not be expected to gain in weight during these periods of painful eruption of the teeth, but the weight may remain stationary for two or three weeks without harm. The baby should not be urged to eat when he has no appetite, merely for the sake of the desired increase in weight. After the disturbance has passed he will be hungry and will soon regain the lost ground. On the other

hand, if the baby is coaxed to take more food than he wants, his digestion is sure to be upset, and this, added to the pain of teething, may result in serious illness. The "second summer" has gained a reputation for being the most critical period of the baby's life, but, as a matter of fact, statistics show that the first summer is a much more hazardous time, and if properly fed and cared for a healthy baby should be brought through the second summer in perfect condition.

WEANING.

Weaning is the process whereby the baby is gradually deprived of breast milk. It should proceed slowly, one bottle feeding being substituted for one breast feeding during the day for some time, then two bottles, and so on until all breast feeding has been done away with and the baby is entirely weaned. In order that this change may be accomplished with as little disturbance as possible, one bottle feeding may be given to the baby in 24 hours as early as the fifth or sixth month. This will hardly be sufficient to upset the baby's digestion and yet will serve to accustom him to the taste of strange food and to the use of the bottle and to begin the education of the stomach in dealing with new materials.

When to wean.—In most cases the baby should be weaned by the end of the first year, and in some cases from one to three months earlier, depending largely upon the health of the baby, the amount and quality of the breast milk, and upon the time of the year. It is unwise to wean the baby in the heat of summer or when infant illness of any sort is epidemic. It has been proved over and over again that breast milk will save a sick baby's life and restore him to health after the strain of a long hot summer, and that often there is no other food that can be relied upon to accomplish the same result. Therefore, even though the breast milk must be supplemented with one or several bottles, it is wise to nurse the baby through the summer so that the breasts will not cease entirely to secrete and may be called on in an emergency. If the baby is weaned at 10 months or earlier he may be fed by bottle; if not until the end of the year, he may be taught to drink from a glass or cup directly.

If drinking water has been given by means of a nursing bottle during much of the first year, the baby will take his food in the same way the more readily. A healthy infant weaned at 9 months should begin with the food for an infant of 4 or 5 months. If he digests this mixture well, the strength can be increased until within two or three weeks he is taking the food full strength. Increase in the diet should be made with special caution at the beginning of summer or during the heat, when there is great danger of inducing diarrhea. It is far better to keep the baby on rather a low diet,

even without increasing his weight, than to upset the intestinal tract by overfeeding. If, after trying a new food, vomiting occurs or the stools show that there is indigestion, it is always best to return to the weaker food until the disturbance has subsided.

Weaning from the bottle.—An artificially fed infant is weaned from the bottle by beginning at 10 months to substitute one feeding a day from the spoon or cup for one bottle feeding, gradually increasing the number of such feedings until the baby is weaned, usually by the thirteenth month. The mother will find it a convenience to continue the bottle for the night feedings as long as necessary.

SLEEP.

The infant brain increases its size two and one-half times in the first year, a greater growth than takes place during all the remaining years of life. At the same time this enormous brain development is taking place the other organs of the little body are growing rapidly. During sleep the body tissues are re-created and the energy and materials needed for the activity of the waking hours are stored up. It is manifest, therefore, that the baby must have a correspondingly large allowance of sleep. He should be provided with the best possible sleeping accommodations, so that the hours of sleep may be of the greatest value to him. He should always sleep in a bed by himself, and whenever possible in a room by himself, where he need not be disturbed by the presence of other persons, and where light, warmth, and ventilation may be adjusted to his particular needs. Not a few young babies are smothered while lying in the bed with an older person, some part of whose body is thrown over the baby's face during heavy sleep.

AMOUNT.

A young baby sleeps 18 or 20 hours out of 24. At 6 months of age a baby sleeps about 16 hours, at 1 year about 14 hours, and at 2 years at least 12 hours. Daytime naps should be continued as long as possible.

REGULARITY.

A baby should be trained from the beginning to have the longest period of unbroken sleep at night. Some babies get a wrong start in this respect and make great trouble by turning night into day. A strong argument in favor of the three-hour nursing interval is that it does away largely with the need for waking the baby to nurse. Nature intends that the baby shall waken when hungry, and this normally occurs about once in three hours in a healthy baby, so that with a little care the regular feeding interval can be made to coincide with the

normal periods of waking. If the baby is still sound asleep when the three-hour period has come around, he should be gently roused and put to breast. This will involve little shock to his nerves, because he will be about ready to waken in any event.

For the first three months the baby will probably sleep both morning and afternoon. As he grows older these two naps will be merged into one, and an effort should be made to have the longest waking interval in the afternoon, gradually training the baby to stay awake long enough at that time to be quite ready to drop off to sleep for the night as soon as he has had his supper. A mother who must prepare and serve the evening meal of the family will find it a great comfort to give the baby his supper at half past 5 and have him in his crib at 6. For the first few months he will be fed again about 10 o'clock, but after that he should not be taken up. He must be made comfortable in every way, the light should be put out, the window opened, his covers adapted to the temperature, but after the mother has assured herself that everything essential to his comfort has been attended to, she should not go to him when he cries, if he is a perfectly healthy baby. A few nights of this training will result in entire comfort for the baby and the family, while the opposite conditions will make the baby a tyrant who ruthlessly spoils the comfort of the entire household.

TEMPERATURE OF SLEEPING ROOM.

For very young or delicate babies the temperature of the sleeping room should be kept at about 65 degrees. After the baby is 3 months old the temperature may be permitted to fall to 55 degrees, and during the second year to 45. Strong and healthy babies are quickly accustomed to cool and even cold sleeping rooms and usually sleep more soundly and keep themselves covered better than when sleeping in warm rooms. In the severe northern winter, where the temperature drops many degrees below freezing before morning, the baby must wear a flannel nightgown over the cotton one. The sleeves should be pinned together over the ends of the fingers so that the hands will be covered. A very soft flannel nightcap may be needed, and heated articles, such as hot-water bottles or bags of sand or salt may be placed in the bed, great care being taken that they are covered in such a way that the baby can not be burned. The baby should also take his daytime naps in a cold room.

Comfortable sleep during the heated portion of the year is more difficult to secure. The most airy room should be chosen, and all the baby's clothing removed, save the diaper and a very thin cotton gown with loose sleeves. It is better, if possible, to keep the baby out of doors during late afternoon and evening until the rooms have cooled.

If there is a screened porch, he may sleep out all night, with sufficient protection from sudden changes in the weather. Out-of-door sleeping in summer, both by night and day, is excellent for the baby after he is a month or two old, provided always that he is protected from flies and mosquitoes, shielded from the sun and wind, and is covered warmly if there is a sudden drop in the temperature. A baby should never be put down to sleep in all his clothes. His shoes, especially, should be removed, and, unless the weather is very cold, it is better to remove the stockings, also. But the baby's feet must always be kept warm.

DISTURBED SLEEP.

If the baby sleeps lightly, awakens often, and seems uncomfortable it may be that something is disturbing him which can be remedied.

He may be nervous from having been tickled, played with, or tossed about in the latter part of the day. Overstimulation is to be avoided at all times, no matter what its source nor what the age of the baby.

He may be too warm, too cold, or wet; there may be something scratching him, or there may be wrinkles in the bedclothing; he may be lying in a cramped position, or the band or diaper may be too tight.

Or, more likely, he has been overfed, or has had something unsuitable to eat, or is hungry or thirsty.

The room may be too hot, too cold, too light, too noisy, or not sufficiently aired. The conditions which make sleep a delight to older persons affect the baby in the same way, namely, plenty of fresh air passing in a constant current through the room, quiet, a clean body, and clean, comfortable clothing, a good bed, and suitable coverings.

A cool bath or a warm one, according to the temperature, will help to induce quiet sleep. In the summer, when the baby is fretful and sleeps restlessly, a tub bath at bedtime will help to relieve him. A little baby should be turned over once or twice in the course of a long nap.

MEDICINES.

Never give a baby any sort of medicine to induce sleep. All soothing sirups or other similar preparations contain drugs that are bad for the baby, and many of them are exceedingly dangerous. Many babies die every year from being given such medicines. The baby should never be allowed to go to sleep with anything in the nature of a pacifier in his mouth. Thumb and finger sucking babies will rebel fiercely at being deprived of this comfort when they are going to sleep, but this must be done if the habit is to be broken up. The baby ought to have a quiet place in which to sleep, but he should be taught to sleep through the ordinary household noises, unless they

are unduly disturbing. It should not be necessary to walk on tiptoe and talk in whispers while the baby sleeps, provided he has a room to himself during his daytime naps.

HABITS, TRAINING, AND DISCIPLINE.

Habits are the result of repeated actions. A properly trained baby is not allowed to learn bad habits which must be unlearned later at great cost of time and patience to both mother and babe. The wise mother strives to start the baby right.

SYSTEMATIC CARE.

In order to establish good habits in the baby, the mother must first be aware what they are, and then how to induce them. Perhaps the first and most essential good habit is that of regularity. This begins at birth, and applies to all the physical functions of the baby—eating, sleeping, and bowel movements. The care of a baby is readily reduced to a system unless he is sick. Such a system is not only one of the greatest factors in keeping the baby well and in training him in a way which will be of value to him all through life, but reduces the work of the mother to the minimum and provides for her certain assured periods of rest and recreation.

As a sample of what is meant by a system in baby care the following plan is suggested, which may be variously modified to suit particular cases:

6 a. m., baby's first nursing.

Family breakfast; children off to school.

9 a. m., baby's bath, followed by second nursing.

Baby sleeps until noon.

12 to 12.30, baby's noon meal.

Out-of-door airing and nap.

3 to 3.30 p. m., afternoon nursing.

Period of waking.

6 to 7 p. m., baby's supper and bed.

It is quite feasible to have the baby's night meal at 11.30 or 12 o'clock, in order to give the mother a chance to spend an occasional evening in pleasant recreation.

PLAYING WITH THE BABY.

The rule that parents should not play with the baby may seem hard, but it is without doubt a safe one. A young, delicate, or nervous baby especially needs rest and quiet, and however robust the child much of the play that is indulged in is more or less harmful. It is a great pleasure to hear the baby laugh and crow in apparent delight, but often the means used to produce the laughter, such as tickling, punching, or tossing makes him irritable and restless. It is a

regrettable fact that the few minutes of play that the father has when he gets home at night, which is often almost the only time he has with the child, may result in nervous disturbance of the baby and upset his regular habits.

The mother should not kiss the baby directly on the mouth, nor permit others to do so, as infections of various kinds are spread in this way. She needs also to be cautioned about rocking the baby, jumping him up and down on her knee, tossing him, shaking his bed or carriage, and, in general, keeping him in constant motion. All these things disturb the baby's nerves and make him more and more dependent upon these attentions. But this is not to say that the baby should be left alone too completely. All babies need "mothering," and should have plenty of it. When the young baby is awake he should frequently be taken up and held quietly in the mother's arms, in a variety of positions, so that no one set of muscles may become overtired. An older child should be taught to sit on the floor or in his pen or crib during part of his waking hours, or he will be very likely to make too great demands upon the mother's strength. No one who has not tried it realizes how much nervous energy can be consumed in "minding" a baby who can creep or walk about, and who must be continually watched and diverted, and the mother who is taking the baby through this period of his life will need to conserve all her strength, and not waste it in useless forms of activity.

BAD HABITS.

Some of the bad habits which a baby learns are these:

Crying.—Crying ought not to be classed as a bad habit without some modification, for although a well-trained baby does not cry very much he has no other means of expressing his needs in the early months of life, and his cry ought to be heeded. But when a baby cries simply because he has learned from experience that this brings him what he wants, it is one of the worst habits he can learn, and one which takes all the strength of the mother to break. Crying should cease when the cause has been removed. If the baby cries persistently for no apparent cause, the mother may suspect illness, pain, hunger, or thirst. The first two of these causes will manifest other symptoms, and the actual need for food may be discovered by frequent weighing. But if finally, after careful scrutiny of all these conditions, no cause for the crying can be found, the baby probably wants to be taken up, walked with, played with, rocked, or to have a light, or to have some one sit by him—all the result of his having learned that crying will get him what he wants, and sufficient to make a spoiled, fussy baby, and a household tyrant whose continual demands make a slave of the mother. It is difficult to break up this habit after it has once been formed,

but it can be done. After the baby's needs have been fully satisfied he should be put down alone and allowed to cry until he goes to sleep. This may sound cruel, and it is very hard for a young mother to do, but it will usually take only a few nights of this discipline to accomplish the result. In some cases persistent crying may be due to causes not readily discernible by the mother; in this event, the opinion of a good doctor as to the cause of the crying should be sought.

"Pacifiers" or "comforts."—The extremely bad habit of sucking on a rubber teat, or a sugar ball, or a bread ball, or any other similar article, is one for which some one else is entirely responsible. The baby does not teach himself this disgusting habit, and he should not have to suffer for it. Some of the evil effects ascribed to this habit are that it spoils the natural arch of the mouth by causing the protrusion of the upper jaw; it induces a constant flow of saliva and keeps the baby drooling; the pacifier is never clean and may readily carry the germs of disease into the baby's mouth; and last and not least, it is a habit which is particularly disfiguring to the baby's appearance. The pacifier, of whatever variety, must be destroyed, and no such object should be permitted in the baby's mouth under any circumstances.

Thumb or finger sucking.—This is another habit leading to the same results as the use of pacifiers, but one which the baby may acquire for himself, although it is frequently taught to him. To break up either habit requires resolution and patience on the part of the mother. The thumb or finger must be persistently and constantly removed from the mouth and the baby's attention diverted to something else. The sleeve may be pinned or sewed down over the fingers of the offending hand for several days and nights, or the hand may be put in a cotton mitten. Ill-tasting applications have very little effect. There are patent articles for holding the hand from the mouth sold in the stores, but the persistent covering of the hand often works very well. The baby's hands should be set free now and then, especially if he is old enough to use his hands for his toys, and at meal times, to save as much unnecessary strain on his nerves as possible, but with the approach of sleeping time the hand must be covered.

Bed wetting.—It requires great patience and persistence on the mother's part to teach the baby to control the bladder. Some babies may be taught to do this during the day by the end of the first year, but it is ordinarily not until some time during the second year that this is accomplished. It is necessary to put the baby on the chamber at frequent intervals during the day. Bed wetting may be due to some physical weakness if it persists in children 3 years old and over. A doctor should be consulted. In ordinary cases, it may suffice if no

liquid food is given in the late afternoon and if the baby is taken up the last thing before the mother retires.

Masturbation.—This is an injurious practice which must be eradicated as soon as discovered, if at all, as it easily grows beyond control. It is more common in girls than in boys. If the mother discovers the baby rubbing its thighs together or rocking backward and forward with its legs crossed, she should divert him at once to some other interest. Nurses sometimes ignorantly rub the genital organs of babies thinking that it quiets them, but nothing could be more deplorable than this. Mothers can not be too watchful of nursemaids and the methods they employ to quiet or amuse a baby. Children are sometimes wrecked for life by habits learned from vicious nurses, and mothers can not guard too strictly against this evil. Another way in which this habit is learned is by means of playthings which rub upon the sensitive parts, such as rocking horses, swings, teeter boards, and the like. The habit may also be due to some local irritation, and it is wise to consult the doctor at the first evidence of the trouble. In the case of babies the treatment consists in mechanical restraints. A thick towel or pad may be used to keep the thighs apart, or at night the hands may have to be restrained by pinning the nightgown sleeves to the bed, or the feet may be tied one to either side of the crib. Wet or soiled diapers should be removed at once. Cleanliness of the parts is of great importance.

PUNISHMENT.

Harsh punishment has no place in the proper upbringing of the baby. A baby knows nothing of right or wrong, but follows his natural inclinations. If these lead him in the wrong direction the mother must be at hand to guide him in another and better one and to divert his eager interest and his energy into wholesome and normal directions. This is the golden rule in the training of babies and one which applies to the training of children of all ages. Many parents conceive that their whole duty is to thwart and forbid, enforcing their prohibitions with penalties of varying degrees of severity, forgetting that they are dealing with a sensitive being endowed with all the desires, inclinations, and tendencies that they themselves have, and that if these natural feelings are continually suppressed and thwarted they are sure to seek and find some outlet for themselves. A child who is often punished may be so dominated by fear of his parents that, the natural expression of his vital interests being denied him, he becomes sullen and morose as he grows older.

EARLY TRAINING.

The training in the use of individual judgment can be begun even in infancy; a child should early be taught to choose certain paths of

action for himself; and if he is continually and absolutely forbidden to do this or that he is sometimes seriously handicapped later, because he does not know how to use his own reasoning faculties in making these choices. On the other hand, obedience is one of the most necessary lessons for children to learn. A wise mother will not abuse her privilege in this respect by a too-exacting practice. For the most part she can exert her control otherwise than by commands, and if she does so her authority when exercised will have greater force and instant obedience will be more readily given.

Most of the naughtiness of infancy can be traced to physical causes. Babies who are fussy, restless, and fretful are usually either uncomfortable in some way because they have not been properly fed and taken care of, are sick or ailing, or have been indulged too much. On the other hand, babies who are properly fed, who are kept clean, and have plenty of sleep and fresh air, and who have been trained in regular habits of life, have no cause for being "bad" and are therefore "good."

It must not be forgotten that the period of infancy is a period of education often of greater consequence than any other two years of life. Not only are all the organs and functions given their primary education, but the faculties of the mind as well receive those initial impulses that determine very largely their direction and efficiency through life. The first nervous impulse which passes through the baby's eyes, ears, fingers, or mouth to the tender brain makes a pathway for itself; the next time another impulse travels over the same path it deepens the impression of the first. It is because the brain is so sensitive to these impressions in childhood that we remember throughout life things that have happened in our early years while nearer events are entirely forgotten. If, therefore, these early stimuli are sent in orderly fashion, the habits thus established and also the tendency to form such habits will persist throughout life.

HOW TO KEEP THE BABY WELL.

The suggestions contained in the following pages are not intended to be a substitute for the care and advice of a physician. But since many mothers are so situated as to be unable to command the services of a physician at once, and since in any case there may be a delay in his arrival, it is well for the mother to understand something of the symptoms of illness and be prepared to deal intelligently with the emergencies that may arise in connection with the care of her children. In all cases of illness the discretion and self-control of the mother are of infinite assistance to the doctor, and when the physician's services are not immediately available the life of the child may depend on the coolness and wisdom of the mother.

The old and most pernicious idea that a certain amount of illness is the necessary accompaniment of infant life is happily fast dying. With the constant increase in the knowledge of the conditions that lead to sickness among children, it is seen that a very large proportion of such illnesses and deaths are preventable by the application of the well-established rules for the proper care of babies. It should therefore be the aim of all intelligent mothers to learn how to save her children from needless illness.

It is said that nine-tenths of all infant illness is due to improper feeding. Whether this is the exact proportion or not, it is quite certain that many babies suffer unnecessarily from mistakes in diet, and it is in this field that the intelligence of the mother is of the greatest value. Babies are usually born healthy, and if they are fed at the breast, or, when this is not possible, with strict regard to the rules for proper artificial feeding, and if they are given hygienic care in other respects and allowed to develop in a natural, normal way, there is little reason why they should be sick, and the responsibility for this rests finally upon the parents. In the following paragraphs is given some account of the minor ailments that may attack babies, together with a brief description of the symptoms of more serious illness at the appearance of which medical advice should be sought whenever possible.

Most of these suggestions apply as well to older children, as there is no hard and fast boundary line to separate the ailments of infancy from those of childhood.

COMMON AILMENTS.

Diarrhea. —The normal, healthy baby usually has one or two stools a day. If the number increases to four or more the mother should be on her guard against diarrhea. Diarrhea is a symptom of nearly all the disturbances of digestion in infancy, both of the mild and of the severe types. The doctor should be consulted at once if possible, for even a slight attack of diarrhea, unless correctly treated, may lead to a severe disturbance such as cholera infantum. Diarrhea is far more frequent in summer than in winter. This is chiefly because the baby is directly affected by the hot weather so that he is more easily upset by his food. Therefore in hot summer weather all babies, and especially bottle-fed babies, should receive especial care. They should be kept as cool as possible. They should be outdoors except when it is cooler indoors; all unnecessary clothes should be removed, a band and diaper being sufficient clothing; frequent cool sponge baths should be given, and the amount of food on especially hot days should be reduced to two-thirds of the ordinary amount, large quantities of water being given in addition.

The disease is more frequent in bottle-fed babies. If it occurs in a nursing baby it is usually because the baby has been nursed too often or at irregular intervals, or has been given food other than milk. Extend the nursing interval and allow the baby to nurse only 5 or 10 minutes. If the trouble continues, withhold the breast altogether for some hours until there is an improvement. Give a little water to drink now and then.

For bottle-fed babies, if the disturbance is slight, the amount of milk used in the feedings should be reduced by half, skimmed, and all sugar omitted. If the trouble is more severe, all food should be stopped, only plain boiled water should be given, and a physician should be consulted at once.

A baby takes some time to get back to full vigor after even a slight digestive disturbance, and the return to food must be gradual. It will take from 10 days to 2 weeks to restore the normal condition of the digestive tract. A second attack of illness occurs much more readily than the original one.

Constipation.—A nursing baby often responds to this condition in the mother. The mother should have a free evacuation of the bowels each day. If she is regular and the baby is still constipated, he must be held over the chamber at exactly the same hour every day in the effort to induce regular movements. Persistence in the establishment of a regular bowel habit in the baby prevents much of this trouble. Orange juice may be given once a day an hour before his midmorning feeding after the baby is 6 months old. Other remedies are suggested in connection with the treatment of the bottle-fed baby.

Constipation in a bottle-fed baby is more difficult to relieve. After the baby is 5 or 6 months old, oatmeal gruel may be found useful in this condition, and fruit juices as well. Orange juice may be given at 5 or 6 months and the strained pulp of prunes or baked apple in the second year. Massage of the abdomen may be tried. Just before holding the baby over the chamber, undress him as much as necessary and let him lie on his back. Moisten the hand in warm olive oil, albolene, or vaseline, and gently massage the abdomen, using a light circular movement and very little pressure. Begin just above the right groin, carry the hand to the ribs, then across the body and down on the left side. Keep this up for 5 or 10 minutes, but do not let the baby become chilled.

Enemas are not to be commonly employed. If resorted to frequently they cause the bowel muscle to lose its tone and soften and dilate the bowel wall. The ideal treatment consists in the education of the intestine in the regular, unaided performance of its natural function, which is best achieved by persistence in a suitable diet. Do not give drugs for the relief of this condition, save under the doctor's direction.

If the baby is constipated, a soap stick or a gluten suppository may be tried. Take a piece of firm white soap half an inch thick and about 2 inches long and shave it down toward one end until the point is about one-quarter of an inch thick and perfectly smooth. Wet the soap stick or dip it in vaseline before using it. Hold the stick by the thick end, insert the other end in the anus, and allow it to remain in one or two minutes. Gluten suppositories may be purchased at a drug store and are accompanied by directions for their use.

If the baby is badly constipated and needs relief at once, an enema may have to be used. For a baby 6 months old or over use a pint of warm water (95 degrees) in which a teaspoonful of common salt has been dissolved, and half as much or less for young babies. Or if the constipation is specially severe, 1 to 2 tablespoonfuls of warm olive oil may be used instead of the salt solution.

To give an enema, use an infant syringe, which is merely a rubber bulb with a nozzle on one end. To fill it, squeeze the bulb while holding the nozzle under water; when the bulb is released it will fill with water by suction. Let the baby lie on his back across the mother's lap, having the buttocks somewhat elevated by means of a folded towel placed under the hips. This position will cause the water to run up into the bowel more readily and serve to catch any drip. Lift the baby's feet with the left hand and with the right introduce the nozzle, which has been greased with vaseline, inside the anus (the opening to the bowel), directing it toward the back. The operation will cause the baby little or no suffering if gently and slowly performed, although if he is badly constipated the starting of the movement may be somewhat painful. When the liquid has been injected, remove the nozzle and press the towel against the opening to the bowel to retain the water until the baby can be placed over the chamber. As the enema sometimes comes away as the nozzle is withdrawn, the mother's clothing should be well protected. If a fountain syringe must be used, the bag should be held hardly higher than the baby, or the water will have too great force.

Hiccough.—This is a spasm of the diaphragm. In infants it is usually due to an irritation of the stomach caused by overfilling the stomach or by swallowing air with the food. In some cases it may be brought on as the result of a sudden exposure to cold. Care should be taken to avoid these causes. When the trouble is in progress, gentle massage of the abdomen or placing the baby face downward across the mother's lap will sometimes afford relief. A few drops of water to drink may help.

Colic.—This is caused by indigestion due to overfeeding, improper feeding, or too frequent feeding. The bowel is distended by gas, giving rise to severe pain. The baby cries sharply, alternately drawing its legs up to the body, then kicking them away. One of the best

means of relief is a small enema of warm water, which will serve to relieve the pain by driving out the gas from the intestine. The feet and legs should be kept very warm, and the abdomen may be massaged with warm oil. Do not feed the baby while the attack lasts. Though the introduction of warm milk into the stomach may quiet the baby temporarily, the pain will return with greater intensity. Warm water may be given if the baby will swallow it. Colic is peculiarly an ailment of young babies and usually disappears by the third or fourth month. It is also very common in breast-fed babies. Constipated babies are more liable to it than others, and attention should be given to remedying this condition as a method of preventing colic. Colic is also caused by cold, and if the baby has been chilled in any way it is well to place him in a warm bath for 5 or 10 minutes, wrapping him warmly after taking him out of the water. The temperature of the bath should be about 100 degrees.

Convulsions.—This is, to the mother, one of the most alarming illnesses of infancy. It is always a symptom of some disturbance and the cause may be slight or very serious. Accordingly, in case any sort of twitching or convulsive motions are noticed, it is wise to send at once for a doctor. If a convulsion occurs before the doctor comes, keep the baby as quiet as possible, with cold cloths to the head. An enema of warm soapy water may be given. Have plenty of hot water ready so that the doctor may give a hot bath if he desires. Constipation is one of the causes of convulsions, and it is most important to keep the bowels freely open if a child shows a tendency to this trouble. Do not feel alarm if the physician administers chloroform, but never attempt its use yourself, as the slightest error in its administration may prove fatal.

Croup.—Catarrhal croup is one of the most alarming diseases of childhood, but it is practically never fatal. It is believed that children with enlarged tonsils and adenoids are more subject to it than others. The onset is very sudden. The child goes to bed apparently in good health and awakens a few hours later with a hoarse metallic cough most alarming to mothers and loud, difficult breathing.

The baby should be taken up and warmly wrapped. The room should be made very warm and a kettle of water set to boil. If the house is piped with water, the hot water may be turned on in the bathroom or kitchen, all the doors and windows closed, and the hot moist atmosphere will soon cause the paroxysm to relax. If kettles of water must be used, the steam will be more effective if confined under a tent made from a large umbrella or a sheet thrown over the crib. A gas or alcohol stove may be used to keep the kettle boiling. There is a "croup kettle" on the market which is very convenient. It has a long spout which carries the steam where it is needed. Mild attacks of croup will often yield to the application of warm moist

cloths about the throat, using great care not to burn the baby's flesh. When possible, the doctor should be summoned in order to make sure that the baby is not suffering from laryngeal diphtheria.

When the attack is over, all damp clothing should be removed and the room very gradually cooled, the child being kept warmly covered. Children who show a croupy tendency should be invigorated by much out-of-door life, nutritious food, daily cold sponging over the neck and throat, and should be examined for adenoids.

Cold in the head (coryza).—This ailment is particularly annoying to babies, because the obstruction of the nasal passages, making breathing difficult, greatly interferes with the ease of nursing. Serious complications may also follow a bad cold. These include bronchitis, pneumonia, tonsillitis, and abscess of the middle ear. A cold is a germ disease and very contagious. As far as possible, babies should be kept away from those suffering with this trouble, as it may be conveyed by a cough or a sneeze from the person affected. When a mother has a "cold," she should avoid kissing the baby or breathing directly in his face or using her handkerchief in his care. A nursing mother who has a cold should cover her nose and mouth with a thin gauze or veil while the baby is at her breast. Paper napkins, which may be purchased for a few cents a hundred, are a great resource at such a time, as they may be freely used and then burned. If the baby becomes infected, a few drops of albolene placed in each nostril by means of a medicine dropper will relieve the baby very much. The bowels should be kept open, and if there is fever the food should be reduced. Keep the baby in a room the temperature of which does not vary greatly during the 24 hours, but provide plenty of fresh air. Babies who live out of doors, who are fed properly and not too heavily dressed, are much less liable to colds than others. It is wise to keep careful watch over a baby thus affected, as certain contagious diseases appear first as a cold in the head.

Prickly heat.—This disease is due to the heat of summer, or to unduly heavy underclothing. It manifests itself in a fine red rash which comes when the baby is overheated and fades away under cooler conditions. The rash often shows itself first on the back of the neck and spreads over the head and shoulders. It is a very annoying trouble and makes the baby fretful and restless.

If the rash appears in cold weather, the baby is too warmly dressed. Heavy flannels are to be avoided, and a thin cotton or silk garment should be worn next to the skin. When it is caused by summer heat, the baby should be made as cool as possible, dressed in the thinnest clothing, and frequently bathed in cool water. Soap should never be used on an inflamed skin, but a starch, bran, or soda bath will help to relieve the intense itching. Ointments are not so soothing in this condition as powders. A satisfactory powder is made by mix-

ing 1 ounce each of powdered starch and powdered oxide of zinc with 60 grains of boric acid. Any druggist will make this up, and it should be used freely over the inflamed spots.

Chafing.—A fat baby is very apt to become chafed in the folds and creases of the skin, especially about the buttocks, where it is due to wet diapers or to those which have been washed with some irritating soap powder or not thoroughly rinsed. Chafed flesh should not have soap used upon it. Starch or bran water may be tried. Keep the skin clean and use the powder above recommended. In obstinate cases, clean with fresh olive oil only, using no water.

Eczema.—This is one of the most persistent and annoying afflictions of babyhood. It is characterized by a swollen, reddened skin, often covered with tiny pimples or crusts, sometimes having a watery discharge; at other times dry and scaly. Some babies have a predisposition to the disease, and in them a slight cause is sufficient to produce it. A baby's skin is very delicate, and any irritation, such as chapping from exposure to cold wind or the use of hard water or strong soap, may lead to eczema, or it may be caused by woolen underclothing, starched bonnets and strings, or unclean diapers. The disease is also caused by digestive troubles due to overfeeding, and often appears in constipated babies. These causes suggest the measures needed for its prevention.

The disease should be treated by a physician, as it is very persistent and must have careful and constant attention. Neither soap nor plain water should be used on the affected parts, which are usually the head and face. Bran or starch water may be used if necessary.

All liquors should be excluded from the diet of a nursing mother, the amount of meat reduced, and her out-of-door exercise increased. For babies fed on cows' milk the diet should be much reduced, both in quantity and strength, and in older children the starchy foods restricted, potatoes and oatmeal being forbidden. It is of the greatest importance that the child have a free bowel movement every day.

To allay the itching, smear the surfaces with an application made of equal parts of limewater and sweet almond oil, or cover them with a starch and boric-acid powder. It is most important that the baby shall not scratch the inflamed skin, and to prevent it pasteboard splints may be bound lightly about the baby's elbows with strips of cotton. It will thus be impossible for him to get his hands to his face, while having their free use for other purposes. A doctor's help and advice are greatly needed in this disease.

Milk crust.—Yellowish, scaly patches sometimes form on a baby's scalp. To remove, anoint with oil or vaseline at night and wash with warm water and pure soap in the morning, but do not attempt to force the crust away. If it does not all come off, repeat the opera-

close the nasal and throat air passages so that the baby can not breathe freely. Later the same causes may lead to deafness and other defects, which very seriously hinder the child's growth, both of body and mind. All babies who show any signs of trouble of this kind should be examined by a competent physician, who will decide how early the operation for the removal of these growths may be performed. Children suffer so seriously from this disease that no parent should be willing to have a child start out under such a handicap. In the hands of a careful surgeon the operation is a slight one, and in many cases the relief is immediate. The illustration on page 70, taken from the New Zealand pamphlet on the Feeding and Care of the Baby, shows how the air passages are blocked by adenoid growths and how the hearing may be affected by the partial closing of the tube leading to the ear.¹

CONTAGIOUS DISEASES.²

Happily, nursing infants are less liable to these diseases than older children; still babies have them to a considerable extent. The general symptoms of this class of diseases are fever, vomiting, persistent discharges from the nose, reddened eyes, sore throat, and skin rashes. If such symptoms appear, the child should be kept away from other children and the doctor summoned at once.

Measles.—This disease is never to be regarded as of small consequence, and it is particularly fatal in the first year of life.³ It is especially to be avoided on account of the complications which may accompany or follow it. Some of these possible complications are bronchitis, pneumonia, tuberculosis, or troubles with the kidneys, eyes, or ears. The disease first appears as a cold in the head. The eyes are red, swollen, and watery; there is running at the nose, and the throat is dry. This stage is followed by a cough and at last, usually after three or four days, the skin breaks out in a profuse rash, which, if it is a mild case, fades away in a few days. The child will be drowsy and fretful and should be kept in bed until the eruption is over.

The eyes are apt to be sensitive in this disease and the crib should be turned so that the baby will not face the windows. It is so essential to have a constant and generous supply of fresh air for the little patient that the windows should not be darkened, as by doing this the ventilation will be cut off to a large extent. Additional protection for the eyes may be secured by placing a dark screen about the crib.

The baby should be covered warmly in cold weather. A liquid diet will be the rule. This, however, and all the medical treatment should

¹ From Feeding and Care of the Baby, New Zealand, 1913.

² Contagious diseases. Supplement to Public Health Reports No. 6.

³ Measles. Supplement to Public Health Reports No. 1 (1913).

be under the direction of a physician, whose care is especially needed to save the child from the complications of the disease.

*Whooping cough.*¹—Few illnesses to which infants and young children are liable are more dangerous than this, and the greatest pains should be taken to protect them from this infection. It is frequently fatal, and at best it is an exhausting disease, often very obstinate, and it may be followed by other distressing sicknesses, such as bronchitis, pneumonia, and tuberculosis. The disease shows the symptoms of a cold in the head, accompanied by a cough, which gradually grows worse, until the characteristic whooping sound appears. The attack lasts from three to eight weeks but often leaves behind it a bronchitis which may persist all winter, if the attack has occurred in the fall. The child should be kept out of doors as much as possible, being protected against cold and exposure by suitable clothing and shelter. Indoors the windows should be open day and night. The bowels should move every day, and the diet should be light but nutritious. Medical advice should always be secured, as under the best treatment the course of the disease may be shortened and the danger of complications greatly lessened. Parents of children suffering from this and other contagious diseases are usually legally and always morally bound to recognize the menace which their sick child is to the well children about, and to respect all necessary precautions and to maintain such quarantine measures as will protect others from exposure. It is believed that this disease, as well as many other contagious diseases, is chiefly communicated by the discharges of the mouth, nose, and throat. Therefore, children suffering from it should, when old enough, use paper napkins for handkerchiefs, and should be urged to use them freely and taught to burn them or put them where they may be burned at once. The mother should use them in the care of the baby. It would undoubtedly save much of the spread of contagious disease if the use of single-service paper handkerchiefs were obligatory in schools.

Pillowcases, towels, and napkins used about the patient may carry the germs from his nose and throat, and should never be used for anyone else until they have been thoroughly disinfected by boiling.

Syphilis.—This disease is one of the most serious with which children can be affected, and, if it is to be cured, involves long and persistent treatment. The prevention of this disease is of first importance. In the vast majority of cases babies are infected from their own parents, and any control of this scourge can be brought about only through the education of parents in their responsibility in this matter. If syphilis makes its appearance in one baby, thoughtful parents will undergo the necessary treatment and see to it that they are both entirely free from disease, as indicated by the most delicate tests,

¹ Whooping Cough: Its nature and prevention. Reprint from Public Health Reports No. 100.

before permitting themselves to produce another child. The baby should also undergo treatment for his own sake and to prevent infection of others.

Tuberculosis.—This is one of the common and fatal diseases of childhood. Prevention is of the greatest importance. Babies and children should be protected from infection by every possible means. The germs are distributed from the sputum of those suffering from the disease, and infants usually contract it from an infected parent or caretaker. The germ may be directly conveyed by kissing or by coughing or sneezing in the baby's face, by using an infected handkerchief for the child, and in other ways. These and other similar ways of infecting the baby suggest the care that is necessary to prevent it. Fresh air, sunshine, and good food are indispensable, both in the prevention of the disease and in its treatment. A tuberculous mother should never attempt to nurse her baby. In case the mother has the disease, both mother and child should live constantly out of doors, and whenever possible city families among whom the disease exists should remove to the country, where the conditions are most favorable to out-of-door life. Public agencies for the relief and prevention of the disease exist in nearly all States, and should be appealed to for instruction and advice.

Hookworm disease.—This disease belongs especially to the southern part of the United States, but travel and the movement of population are distributing it more or less widely. It prevails particularly in sandy soils and in country districts and is caused by a tiny worm which grows in polluted soil and is taken into the body through the skin. Among children the worm finds its way into the body usually through the soles of bare feet. Possibly, also, it is taken into the body in drinking water or on uncooked vegetables, such as salads. The worm is particularly active just after a rain or a heavy dew, and in warm moist places. This disease is manifested by dry hair, tallowlike skin, paleness, headache, swollen abdomen, sores on the legs, and the like. There will be little red swollen places where the worm enters the flesh. The disease usually responds promptly to medical treatment, and if a child is discovered scratching his toes or feet he should be taken at once to a physician.

Prevention is of first importance. A circular giving a full description of the disease, its causes, and how to prevent it, may be had, free of charge, by applying to the Public Health Service, Washington, D. C.¹

The spread of the hookworm is due to the pollution of the soil by the use of open privies or by the scattering of the bowel movements of persons infected with the worm. The use of sanitary closets is abso-

¹ Hookworm Disease: Its nature, treatment, and prevention. Public Health Bull. 32.

lutely necessary if the disease is to be controlled. Models of such closets are given in the bulletin already referred to. (See Appendix for additional publications on the subject of sanitary privies.)

Vulvovaginitis.—The principal signs of the disease are a yellowish white vaginal discharge. There is apt to be some redness of the parts, and if the discharge is profuse, the adjacent skin of the thighs may be reddened by irritation. The baby should be taken to the doctor at the first appearance of the symptoms.

It is a very contagious disease which is spreading with alarming rapidity throughout the country. When one little girl contracts it there is grave danger of its being transmitted to every other little girl in the house. Only absolute separation, not only of the infected child but of all of her clothing, her towels, wash cloths, soap, etc., can prevent its spread. The hands of the mother should have a thorough scrubbing with soap and brush and should then be washed in a disinfecting solution.¹

Under no circumstances should the infected child sleep with any member of the household. Great care must be taken not to carry the disease to the eyes, either of mother or baby, by the fingers. The mother must not touch her own or the baby's face until her hands have been cleansed as above, and she must continually guard the baby against doing so. The baby should wear a vulval pad as long as the discharge lasts.

All the infected child's clothing should be placed in a disinfecting solution and then boiled.

Trachoma.—This is a dangerous infectious disease of the eyes which is spreading alarmingly in certain parts of the country and which is responsible for much blindness. It is first shown by swollen, reddened lids with a discharge of pus from the eyes, which are highly sensitive to the light.

The disease spreads from one person to another by the use of a common washbasin, towels, handkerchiefs, and the like, so that children and even infants are as likely to be infected as grown persons. There can never be any effective control over this and many other diseases until parents generally learn what is required, not only for their cure, but, most of all, for their prevention.

When trachoma appears or is suspected in a community, parents should appeal to the local health authorities and other physicians to see that the proper measures are undertaken for the treatment of these and the prevention of other cases, and State authorities may be called upon, as well. The Public Health Service of the United States publishes free literature on the subject. (See Appendix.)

¹ See Appendix for disinfectants.

GENERAL HEALTH CONDITIONS.

GERMS.

Infectious diseases are due to harmful germs or microscopic plants of very simple structure, which are present in the excretions of persons suffering with such diseases, and may be transferred by flies or other means to milk, water, and other foods. Disease germs are removed by disinfection, which means simply cleanliness. Sunshine, fresh air, hot water and soap are the best ordinary disinfectants. If there is contagious illness in the house, or if some member of the family has inflamed eyes, or a sore or wound of any sort to be dressed, the mother should scrub her hands thoroughly in hot water, using plenty of soap and a stiff brush. In addition she should dip them in alcohol or some other disinfecting solution. She should thus cleanse her hands both before and after attending to the sore part, to prevent carrying any harmful germ to the wound or to her own or another's eyes or body.¹

FLIES.

Some forms of infantile diarrhea and other diseases are caused by germs which may be carried about by flies. It is therefore of great importance to the health and the life of every baby not only to protect him from flies but to keep them away from his food, dishes, and utensils. To accomplish this all the doors and windows should be screened, and when the baby is taken out of doors he should be protected, especially while asleep. For this purpose a screened bed of some sort is necessary.

The conditions which favor the growth of flies should be done away with to the greatest possible extent. The favorite breeding ground of the common housefly is in horse manure, and with the partial elimination of the horse by the extensive use of automobiles and the consequent decrease of stables the number of flies has noticeably diminished. One stable, however, will furnish flies enough to infest a considerable district, and in most of our cities at the present time there are stringent regulations regarding the care and disposal of manure which it is to the interest of every health-loving citizen to assist the authorities in enforcing. Since the period required to produce a full-grown fly from the egg is about 8 days, the manure should be disposed of at least as often as once a week. When this can not be done, it should be disinfected with Paris green, borax, copperas, or cresol solutions to kill the maggots. Recent experiments indicate that borax is the best and cheapest disinfectant for this purpose.

After the flies have hatched they seek feeding places, which they find in uncovered garbage pails, foul drains, privies, and in decaying matter of every sort, as well as in the household food which may

¹ See Appendix for disinfectants.

have been left exposed. Walking over the food, they leave a trail of dirt, including often the germs of disease, such as typhoid fever or dysentery, which may thus be conveyed into the human system. Garbage and refuse of all sorts, rubbish heaps, decaying matter, and anything which gives rise to foul odors should be covered, disinfected, or removed. Most important of all, however, is the substitution of sanitary privies for the kind in ordinary use in the country. If the flies can be kept away from human excretions they lose much of their power to harm, as they will not then be brought into contact with germs of typhoid fever and other diseases so communicated. Privies should be screened, with closed closets, the contents of which must be completely buried when removed.¹

PATENT MEDICINES.²

Attention has already been called to the danger of giving medicines to babies and children save under competent medical advice, but it is well to emphasize this prohibition particularly in regard to proprietary preparations. Numerous widely advertised nostrums, frequently sold as "soothing" sirups, and preparations claiming to cure the ills of teething, diarrhea, coughs, colds, and the like, often contain dangerous drugs, and many children have lost their lives by being given such medicines. There is evidence to show that children who are repeatedly dosed, but who survive the dosing, sometimes learn to crave these quieting drugs. They are restless and irritable after the effect of the drug wears off and remain so until it is repeated, the drug habit being thus formed in the same way as with grown people.³ If urged to use a patent medicine, the mother should always examine the label very carefully, for the Federal food and drugs act requires the manufacturers of patent medicines to print on the label of the bottle the amount or proportion of certain dangerous drugs that may be present in the so-called "remedy." Drugs enumerated in the law are: ⁴

Alcohol, morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilide, or any derivative or preparation of any such substance contained therein.

If the names of any of these drugs or derivatives of them, some of which are laudanum, paregoric, Dover's powder, codein, dionin, chlorodyne, hypnal, acetphenetidin, lactophenin, phenacetin, antipyrin, analgesin, antikamnia, orangeine, and phenalgin,⁵ appear on the label, or if extravagant claims are made in the advertisements as to the power of the medicine to cure a large number of diseases, the mother should be on her guard against the "remedy."

¹ See Appendix for references on Flies, Mosquitoes, Sanitary privies, etc.

² Courtesy of Dr. T. C. Merrill, Bureau of Chemistry, Department of Agriculture.

³ Habit-forming Agents, Farmers' Bull. 393, U. S. Dept. Agr., 1910.

⁴ Federal food and drugs act, 1906.

⁵ Regulation 28, Federal food and drugs act, 1906, includes these among other derivatives.

In addition to these medicines, a great many proprietary articles are on the market, which, although not falling within the provisions of this act, since they do not contain the specified drugs, nevertheless may do much harm, as they contain sugars, sirups, flavoring materials, and other substances which are very likely to upset the digestion of the baby.

VACCINATION.

Babies should be vaccinated before teething begins. There is less disturbance from it earlier than later, provided the baby is healthy. A suitable time is at from 3 to 6 months of age. The sore made by vaccination should not be covered by any shield which is impervious to air, but must be lightly protected. Various methods are used by physicians, but one of the simplest is to cover it with a loose, wide bandage of sterile gauze, or old linen (recently boiled, to make it perfectly clean). An old handkerchief makes a good bandage, and any of these may be sewed or pinned inside the sleeve. If the bandage becomes wet with the discharge from the sore and sticks to the scab, it should not be pulled off, but the cloth may be cut away around it and a small piece left adhering. The bandage should be changed once or twice a day, or as often as necessary to keep the wound perfectly clean.

TO TAKE THE TEMPERATURE.

Place the baby face downward on the mother's lap with his head to her left. With the right hand slowly insert the bulb end of a clinical thermometer, which has been first dipped in vaseline, in the anus (the opening of the bowel). Direct it toward the back and hold it in 4 minutes. At least two-thirds of the length of an ordinary clinical thermometer should be visible. Great care must be taken to hold the baby's legs so firmly that the thermometer is not broken.

CLEANLY HABITS.

Children should be taught very early that it is not safe to use a handkerchief that has been used by some one else, and for similar reasons the use of individual towels and wash cloths should be insisted upon.

A baby should be taught to blow its nose, to submit the tongue and throat to inspection, to gargle, and to regard the doctor as a friend whose visits are to be looked forward to with pleasure. Attention to these suggestions will make the task of the physician at some critical time far less difficult than it otherwise might be. If a baby has sometimes been threatened with a visit from the doctor as a means of securing obedience, his fear may be a serious drawback to successful treatment.

RECIPES.

GRUELS AND CEREAL JELLIES.

Barley.—Barley water, gruel, and jelly differ only in thickness. For barley water use 2 level teaspoonfuls of barley flour. Make it into a paste with cold water and add to it a pint of boiling water, stirring continually to prevent lumps. Add a pinch of salt and cook for at least an hour, adding sufficient water at the end to make a pint of liquid. Strain through a cheesecloth or gauze strainer. If gruel or jelly is desired, use two to eight times as much flour to the same amount of water. Pearl barley may be used if necessary. The grains must soak overnight and be cooked for three to four hours. Use a heaping teaspoonful of the grains for a pint of water.

Oatmeal.—Have a pint of water boiling in the top of the double boiler; add half a teaspoonful of salt and drop in gradually half a cup of oatmeal flakes, stirring all the while. Then cook for three hours and strain through a wire sieve. Thin with boiling water to the desired consistency.

Rice and wheat.—Rice jelly is made in the same way as barley jelly. The directions for cooking the various wheat preparations appear on the boxes, but all such preparations should be cooked at least three times as long as is there indicated, and should be strained, and thinned to the proper strength with boiling water.

A fireless cooker is a great help in the preparation of cereals. If porridges are cooked for the family breakfast, a large spoonful of the cooked porridge may be added to a pint of boiling water, heated, stirred, and strained to make a thin gruel.

Corn meal.—Corn-meal gruel is especially good for the nursing mother, as it seems to promote the flow of milk. Have a quart of boiling salted water and add a cup of fine, yellow corn meal which has been stirred into a thick paste with a little cold water. Cook for two hours, adding boiling water as may be needed. Eat with milk and sugar, or as desired. Grits is also an excellent food, but needs long cooking.

FRUITS AND FRUIT JUICES.

Orange and all other fruit juices should be strained through a wire strainer or a cloth, so as to remove every particle of solid matter, and in addition should be diluted by using an equal quantity of water for a baby of 5 months, gradually diminishing this amount until the juice is given pure.

Apples may be stewed or baked.

Prunes are prepared as follows: Wash them well through several waters, then put them to soak overnight. Cook them the next day in the same water. It will take only a little cooking to make them

perfectly tender. A very little sugar may be added, but for a baby it is best to omit the sugar, as the fruit has its own sugar. The clear juice is laxative. In the second year the cooked fruit may be squeezed through a colander and the strained pulp given to the baby.

MEATS.

Scraped beef or mutton.—Take meat, preferably from the round, free from fat. Place on a board and scrape with a silver spoon. When you have the desired amount of meat pulp, shape into a pat and broil on a hot, dry spider. Do not cook too long. When done season with a little salt and butter and serve. A few drops of lemon juice may be added.

Beef juice.—Broil lightly a piece of the round of beef, cut in strips, and squeeze the juice out with a meat press or a large lemon squeezer. The juice may be extracted without cooking the meat at all. This is accomplished by soaking beef in cold water. Use a pound of chopped round of beef. Put it in a glass jar with one-fourth as much water. Turn the jar upside down now and then and allow the meat to soak for several hours or overnight, keeping it on ice. In the morning, empty the whole into a coarse muslin bag and squeeze out the juice. Season with a little salt. This juice should not be cooked, but warmed slightly before feeding it, and may be added to milk if desired. If needed more quickly, put the beef in a bowl with crushed ice. Cover the meat and ice with a small plate weighted down with a flatiron.

Broths.—Chicken, beef, or mutton may be used as the basis of broth. Use a pint of water to each pound of the meat. Put the meat on in cold water and allow it to come to a boil, then lower the fire so that it will barely simmer for three or four hours. Or prepare it in the fireless cooker as directed for soup.

When the meat is tender, remove it and add enough water to make up the original amount of liquid; strain through a wire sieve and set it away to cool. When cold, the fat may be removed in a solid piece, leaving a clear liquid or jelly. Heat a small portion, seasoning with salt only. Broth has little or no nutritive value in itself, but if added to milk, or thickened with arrowroot, cornstarch, or gelatin, or eaten with dry bread crumbs it becomes a real food.

If it is desired to use the broth at once, pour out a little into a bowl or soup plate, and set the dish on the ice or in a pan of very cold water. The fat will rise and may be skimmed or strained off.

BREADS.

Toast.—The ordinary breakfast toast is not suitable for a baby. For him the bread should be at least one day old and be cut in very thin slices. The slices should be placed on edge in a toast rack in

the oven to dry, or kept separated by some other means. Leave the oven door partly open. The slices should not brown, but after they are dry they may be lightly toasted and should be tender and of a uniform dryness throughout.

Dried bread.—This is similar to the toast. Pull a loaf of fresh bread in pieces and dry in the oven in the same way, then toast very lightly, as needed. No fresh-baked or hot breads of any sort should be given to the baby.

Bran bread.—One cup of cooking molasses, 1 teaspoonful of soda, 1 small teaspoonful of salt, 1 pint of sour milk or buttermilk, 1 quart of bran, 1 pint of flour. Stir well and bake for one hour in a slow oven. It may be baked in a loaf or in gem pans as preferred.

EGGS.

Coddled eggs.—Have a saucepan of water boiling hard, put the egg into the water and remove the dish from the fire at once. Cover, and allow the egg to cook about seven or eight minutes. The white should be soft and of a jellylike consistency, which makes it quite readily digestible. A few experiments will determine what quantity of water to use. Too much water will cook the egg too hard. Some children can not digest the yolks of eggs, and it is wise on this account to begin by feeding the white only. Season with a little salt.

VEGETABLES.¹

Cauliflower.—One small head of cauliflower, 1 quart of water, 1 teaspoonful of flour, 1 teaspoonful of salt, one-half cup of sweet milk, 1 teaspoonful of butter. Clean and break up cauliflower and cook it 20 minutes in boiling water with a little salt. Drain. Make a sauce with one-fourth cup of water in which the cauliflower was cooked, the butter, flour, and milk. Pour sauce over cauliflower. If very small pieces are desired, mash with a fork or rub through a coarse sieve.

Spinach.—Cook spinach in salted water until tender. Pour cold water over it and drain. Chop fine or rub through a coarse sieve. To 2 tablespoonfuls of spinach add 1 teaspoonful of fine bread crumbs, one-half teaspoonful melted butter, and a little salt. Reheat and serve.

Asparagus.—Cook one-half of a bunch of asparagus in about a pint of slightly salted water. When tender remove stalks, one by one. Place on a warm plate and remove pulp by taking hold of the firm end of stalk, scraping lightly with a fork toward the tip. Use pulp only.

Make a sauce with one-fourth cup of water in which the asparagus was cooked, one-fourth cup of milk, 1 teaspoonful of flour, a little butter and salt. Dip a small piece of toast in the sauce. Take what

¹ Courtesy of Dr. J. P. Sedgwick, Medical School of the University of Minnesota.

is left of the sauce and mix with 2 tablespoonfuls of asparagus pulp. Reheat. Place on toast and serve.

Carrots.—Cook one-half pound of young carrots in a pint of fat-free soup stock or slightly salted water, adding more if it cooks away before they are done. Rub through a sieve, add 1 teaspoonful of bread crumbs, a little butter and salt. Reheat and serve.

Beans.—Soak 2 ounces or 4 tablespoonfuls of beans and cook them slowly in a good deal of water until they are soft, but not broken. Rub through a sieve, add 1 cupful of soup stock and let them cook for one-half hour, adding more stock if it boils away. Mix a little butter and flour, about a saltspoonful of each, and a little salt. Add to soup. Return to fire and cook for a few minutes.

Green peas.—Cook a cupful of green peas in boiling salted water until they are done. Drain, saving the water in which they are cooked. Rub through a coarse sieve. Make a sauce of 2 tablespoonfuls of water in which the peas were boiled, 2 tablespoonfuls of sweet milk, one-half teaspoonful of flour, one-half teaspoonful of fine bread crumbs. Mix all together. Reheat and serve.

Cream soups.—Cream soups may be made from vegetable pulp, using 1 tablespoonful of cooked potatoes, peas, or asparagus to one-half cup of water in which the vegetables were cooked, one-half cup of sweet milk, and one-half teaspoonful of flour with a little butter and salt. Cook another minute or two. Strain if necessary. Serve.

. APPENDIX.

GOVERNMENT PUBLICATIONS ON DOMESTIC SCIENCE.

Much helpful and instructive literature concerning the health and welfare of the family and the sanitation of the home is published by different branches of the Federal Government, notably by the various bureaus of the Department of Agriculture, by the Public Health Service of the Treasury Department, and by the Children's Bureau of the Department of Labor. The titles of these publications, as well as of a few private publications of special interest, are given below.

The following publications are a few of those pertaining directly to domestic problems, several of which are referred to in the present volume. Most of the Government publications are distributed free of charge to residents of the United States. Some, however, have a small price attached. The titles of these are marked with an asterisk (*). These are to be purchased from the superintendent of documents, Washington, D. C. Farmers' Bulletins, Entomology Circulars, Animal Industry Circulars, and Weekly News Letters are to be had by addressing a request to the Secretary of Agriculture; and Public Health Reports, reprints from Public Health Reports, Hygienic Laboratory Bulletins, and Public Health Bulletins, from the Public Health Service, Washington, D. C. Publications of the Children's Bureau are sent free upon application to the chief of the bureau.

MILK.

The care of milk and its use in the home, Farmers' Bulletin No. 413.

Use of milk as food, Farmers' Bulletin No. 363.

*The covered milk pail, Farmers' Bulletin No. 210.

*The influence of breed and individuality on the composition of milk, Bureau of Animal Industry Bulletin No. 156.

Extra cost of producing clean milk, Bureau of Animal Industry Circular No. 170.

*Milk and its relation to public health, Hygienic Laboratory Bulletin No. 56. (\$1.)

Clean milk: Production and handling, Farmers' Bulletin No. 602.

Removing garlic flavor from milk and cream, Farmers' Bulletin No. 608.

OTHER FOODS.

Principles of nutrition and nutritive value of food, Farmers' Bulletin No. 142.

Preparation of vegetables for the table, Farmers' Bulletin No. 256.

Care of food in the home, Farmers' Bulletin No. 375.

Cereal breakfast foods, Farmers' Bulletin No. 249.

Meats, composition and cooking, Farmers' Bulletin No. 34.

Economical use of meat in the home, Farmers' Bulletin No. 391.

*Bread and toast, Farmers' Bulletin No. 193.

The home vegetable garden, Farmers' Bulletin No. 255.

Food value of corn and corn products, Farmers' Bulletin No. 298.

Nuts and their uses as food, Farmers' Bulletin No. 332.

Cheese and its economical uses in the diet, Farmers' Bulletin No. 487.

Canning vegetables in the home, Farmers' Bulletin No. 359.

Bread and bread making, Farmers' Bulletin No. 389.

Mutton and its value in the diet, Farmers' Bulletin No. 526.

Sugar and its value as food, Farmers' Bulletin No. 535.

Eggs and their uses as food, Farmers' Bulletin No. 128.

Poultry as food, Farmers' Bulletin No. 182.

Fish as food, Farmers' Bulletin No. 85.
 Beans, peas, and other legumes as food, Farmers' Bulletin No. 121.
 Use of fruit as food, Farmers' Bulletin No. 293.
 Potatoes and other root crops as food, Farmers' Bulletin No. 295.
 Use of corn, kafir, and cowpeas in the home, Farmers' Bulletin No. 559.
 Corn meal as a food and ways of using it, Farmers' Bulletin No. 565.
 Okra: Its culture and uses, Farmers' Bulletin No. 232.
 Home manufacture and use of unfermented grape juice, Farmers' Bulletin No. 175.

INSECTS.

House flies, Farmers' Bulletin No. 459.
 Remedies and preventives against mosquitoes, Farmers Bulletin No. 444.
 How insects affect health in rural districts, Farmers' Bulletin No. 155.
 Practical methods of disinfecting stables, Farmers' Bulletin No. 480.
 Experiments in the destruction of fly larvæ in horse manure, Department of Agriculture Bulletin No. 118.
 House ants, Entomology Circular No. 34, second series, revised.
 The true clothes moths, Entomology Circular No. 36, second series, revised.
 The bedbug, Entomology Circular No. 47, revised edition.
 The silver fish, Entomology Circular No. 49, second series.
 Cockroaches, Entomology Circular No. 51, revised.
 House fleas, Entomology Circular No. 108.
 Hydrocyanic-acid gas against household insects, Entomology Circular No. 163.
 A homemade flytrap for 20 cents, Weekly News Letter, August 12, 1914.

THE HOUSE.

Practical suggestions for farm buildings, Farmers' Bulletin No. 126.
 Modern conveniences for the farm home, Farmers' Bulletin No. 270.
 How a city family managed a farm, Farmers' Bulletin No. 432.
 *A cheap and efficient sterilizer, Farmers' Bulletin No. 353.
 *A cheap and efficient ice box, Farmers' Bulletin No. 353.
 *The fireless cooker, Farmers' Bulletin No. 296.
 *A model kitchen, Farmers' Bulletin No. 342.
 The farm kitchen as a workshop, Farmers' Bulletin No. 607.

PRIVIES.

The sanitary privy, Farmers' Bulletin No. 463.
 Sanitary privy, its purpose and construction, Public Health Bulletin No. 37.
 *Disposal of night soil, Public Health Reports, Reprint, No. 54. (5 cents.)
 Standard sanitary privy, North Carolina Board of Health, Raleigh, N. C.

SEWAGE DISPOSAL.

Sewage disposal on the farm and the protection of drinking water, Farmers' Bulletin No. 43.
 *Milk and pure water, Farmers' Bulletin No. 296.

DISEASE.

Contagious diseases: Their prevention and control in children's institutions, Public Health Reports, Supplement, No. 6.
 Measles, Public Health Reports, Supplement, No. 1.
 Whooping cough: Its nature and prevention, Public Health Reports, Reprint, No. 100.
 Hookworm disease: Its nature, treatment, and prevention, Public Health Bulletin No. 32.
 Tuberculosis: Its nature and prevention, Public Health Bulletin No. 36.
 Tuberculosis: Its predisposing causes, Public Health Reports, Supplement, No. 3.
 Open-air schools for the cure and prevention of tuberculosis among children, Public Health Bulletin No. 58.
 The relation of climate to the treatment of pulmonary tuberculosis, Public Health Bulletin No. 35.
 Trachoma in Kentucky, Public Health Reports, Reprint, No. 196.
 Trachoma in Minnesota, Public Health Reports, Reprint, No. 134.
 Trachoma in Kentucky, Public Health Reports, Reprint, No. 101.
 Some facts about malaria, Farmers' Bulletin No. 450.
 How to prevent typhoid fever, Farmers' Bulletin No. 478.
 The duty of a good neighbor, Weekly News Letter, October 7, 1914.

DRUGS.

Habit-forming agents: Their indiscriminate sale and use a menace to the public welfare, Farmers' Bulletin No. 893.

Harmfulness of headache mixtures, Farmers' Bulletin No. 377.

DISINFECTANTS.

Some common disinfectants, Farmers' Bulletin No. 345.

Disinfectants: Their use and application in the prevention of communicable diseases, Public Health Bulletin No. 42.

HYGIENE OF CHILDREN.

Care of the baby, Public Health Reports, Supplement, No. 10.

Summer care of infants, Public Health Reports, Supplement, No. 13.

Prenatal care, Children's Bureau, Care of children series No. 1.

Infant care, Children's Bureau, Care of children series No. 2.

Heat and infant mortality, Public Health Reports, Reprint, No. 155.

Sewage-polluted water supplies in relation to infant mortality, Public Health Reports, Reprint, No. 77.

Baby-saving campaigns, Children's Bureau, Infant mortality series No. 1.

Report of New Zealand Society for the Health of Women and Children, Children's Bureau, Infant mortality series No. 2.

Infant feeding in the Tropics, W. E. Deeks, Chief of Medical Clinic, Ancon Hospital. Reprint Proceedings Canal Zone Medical Association, 1911.

BIRTH REGISTRATION.

Birth registration, Monograph No. 1, 2d edition, Children's Bureau.

INDEX.

	Page.		Page.
Adenoids.....	70	Closets, sanitary, necessity for.....	73
Ailments, common.....	64	Clothing, for baby.....	14
Air, fresh.....	10, 23, 34	Cold in the head.....	68
Amusements for nursing mother.....	34	first symptom of measles.....	71
Apples.....	78	Colic.....	66
Asparagus, recipe for preparation of.....	80	Constipation of baby.....	65
Baby, normal.....	51	of mother.....	34
Bands.....	15	Convulsions.....	67
Barley gruel or jelly.....	78	Corn-meal gruel.....	78
Baths and bathing, for baby.....	26	Cotton, material for underwear.....	15
bran.....	29	Cough, symptom of croup.....	67
cool.....	28	Cows, breed of.....	40
for nursing mother.....	34	Cream soups.....	81
objections to.....	28	Creeping pen.....	24
salt.....	28	Croup.....	67
sea.....	29	Crying.....	60
soda.....	29	symptom of underfeeding.....	48
starch.....	29	Diapers.....	16
temperature of room for.....	27	Diarrhea.....	64
temperature of water for.....	27	Digestion, process of.....	31
Beans, recipe for preparation of.....	81	Diet for nursing mother.....	33
Bed.....	11	Discharge, vaginal.....	74
making.....	12	Diseases, contagious.....	71
wetting.....	61	Disease, Government publications concerning.....	83
Beef juice.....	79	Disinfectant, Government publications concerning.....	84
Birth, form for recording.....	2d page of cover.	Domestic science, Government publications on.....	82
registration of.....	9	Drugs, Government publications concerning.....	84
Government publication concerning.....	84	Drug habit in children.....	76
Blankets, covering for.....	13	Ears, care of.....	30
Bottle, care of.....	45	Eczema.....	69
how to give to baby.....	47	Eggs, coddled.....	80
new, annealing of.....	45	raw, for mother.....	37
Bottle-fed baby. (See Feeding, artificial.)		Enema, caution as to.....	65
Bowels, distended, symptom of colic.....	66	to give.....	66
loose, treatment for.....	48	Equipment of nursery.....	14
Breads, recipes for.....	79	Exercise for nursing mother.....	34
bran.....	80	Eyes, care of.....	30
dried.....	80	shielding from light.....	24
toasted.....	79	Feeding.....	31
Breast feeding.....	31	artificial.....	39
Broths, meat.....	79	breast.....	31
Care of the baby.....	26	how much to feed.....	37
Carrots.....	81	how often to feed.....	36
Cart, folding, use of.....	25	improper, cause of unnecessary illness.....	64
Cauliflower.....	80	of older infants.....	49
Caution, about screens.....	24	overfeeding.....	48
about shielding baby's eyes.....	24	regularity in.....	36
about use of chloroform.....	67	supplementary.....	37
about windows.....	24	underfeeding.....	48
Chafing.....	69	First year, importance of health during.....	32
Chamber, training in use of.....	51	Flies.....	75
Children, hygiene of, Government publications concerning.....	84	Government publications concerning.....	88
Chloroform, caution in use of.....	67	protection from.....	24
Cleaning of nursery.....	11	Food, amount of.....	42
Cloaks and caps.....	19	essentials of.....	31
pattern for winter wrap.....	22		

	Page.		Page.
Food, for nursing mother.....	33	Milk, Government publications concerning..	82
Government publications concerning.....	82	heating or cooking.....	49
kind of.....	41	mother's.....	33
preparation of.....	43	pasteurizing.....	46
proprietary.....	48	temperature of.....	47
recipes for.....	78	Milk crust.....	69
Foot, shape of baby's (plate).....	20	Mosquitoes, Government publications con- cerning.....	82
Fruits and fruit juices.....	78	protect from.....	24
Garbage pails, danger from.....	75	Moss, sphagnum, use of.....	17
Genital organs, care of.....	30	Mother, nursing.....	32
Germ.....	75	"Mothering," need of.....	69
in milk.....	40	Mouth, care of.....	39
Government publications on domestic science	82	open while sleeping, symptom of adenoids.	79
birth registration.....	84	Mutton.....	79
disease.....	83	Napkins, paper, use of.....	68
disinfectants.....	84	Naughtiness, cause of.....	63
drugs.....	84	Netting, caution in use of.....	24
house.....	83	Nightgowns.....	16
hygiene of children.....	84	of flannel in severe weather.....	57
insects.....	83	Nipples.....	45
milk.....	82	care of rubber.....	46
other foods.....	82	kind to use.....	45
privies.....	83	of nursing mother, care of.....	35
sewage disposal.....	83	Nose, care of.....	30
Gruels and cereal jellies.....	78	Nursemaids, warning as to.....	26
Habits, bad.....	60	Nursery.....	10
cleanly.....	77	bed for.....	11
importance of early training in good	63	cleaning of.....	11
training, and discipline.....	59	furniture for.....	14
Handkerchiefs, use of.....	77	heating of.....	11
Hands, care of, in case of contagious disease..	74	light and ventilation in.....	10
Health conditions, general.....	75	other equipment of.....	14
Health of baby, importance of, in first year..	32	Nursing, technique of.....	35
of nursemaids.....	26	intervals.....	36
Heating of nursery, best method of.....	11	position of baby in.....	35
Hiccough.....	66	regularity in.....	36
High chair, harm in use of.....	29	Oatmeal gruel or jelly.....	78
Home, selection of.....	9	Older infants, feeding of.....	49
Hookworm disease.....	73	Oranges. (See Fruits and fruit juices.)	
House, Government publications concerning	83	Outings, carriage.....	25
How to feed the baby.....	41	Out-of-door life.....	23
How to keep the baby well.....	63	"Pacifiers" or "comforts".....	61
Ice box, homemade.....	41	Pasteurizing of milk.....	46
Illness, improper feeding, cause of.....	32	Peas, green.....	81
needless.....	64	Petticoats.....	16
Indigestion, cause of, in mother.....	33	Pillow for child's bed.....	12
treatment of.....	41	Playing with baby.....	59
Infant foods. (See Proprietary foods.)		Porch, screened.....	23
Insects, Government publications concerning	83	Powder, toilet, directions for making.....	68
Letter of transmittal.....	7	use of.....	28
Lifting the baby.....	29	Preparation of food.....	43
Light and ventilation in nursery.....	10	Prickly heat.....	68
Living conditions.....	9	Privies, Government publications concern- ing.....	83
Massage for constipation.....	65	Proprietary articles, danger in use of.....	76
Masturbation.....	62	foods.....	48
Measles.....	71	Prunes. (See Fruits and fruit juices.)	
Meats, recipes for preparation of.....	79	Punishment.....	62
Medicines, Government publications concern- ing.....	84	Recipes.....	78
patent.....	76	Recreation for mother.....	34
to induce sleep.....	58	Rice gruel or jelly.....	78
Milk.....	39	Rickets.....	70
boiling.....	47	Scales.....	37
care of.....	40	Scalp.....	69
certified.....	39	Scraped beef.....	79

	Page.		Page.
Scurvy.....	70	Temperature—Continued.	
"Second summer".....	55	of water for bath.....	27
Self-control of mother, importance of.....	63	to take, of baby.....	77
Sewage disposal, Government publications concerning.....	83	Thermometer, bath.....	27
Shirts.....	15	clinical.....	77
Shoes and stockings.....	19	Tonsils, enlarged.....	70
Sleep for baby.....	56	Toys.....	30
Slips.....	16	Trachoma.....	74
Soap stick.....	66	Tropics, infant feeding in.....	50
Soap, strong, cause of eczema.....	69	Tuberculosis.....	73
Soothing sirups, danger from.....	58	Undergarments, best material for.....	15
Soups, cream, recipe for.....	81	Utensils for preparing food.....	43
Special organs, care of.....	30	Vaccination.....	77
Spinach.....	80	Vegetables, recipes for preparation of.....	80
Stools, infant.....	50	Vehicles for baby.....	20
frequent, symptom of diarrhea.....	64	Ventilation of nursery.....	10
Strap, safety.....	26	Vulvovaginitis.....	74
Syphilis.....	72	Water, drinking.....	49
Syringe, infant.....	66	temperature of, for bath.....	27
Teeth.....	52	Weaning.....	55
Teething, ailments of.....	54	Weight of baby.....	37
Temperature, of milk for baby.....	47	record for.....	3d page of cover.
of room for bath.....	27	Wheat gruel.....	78
of sleeping room.....	57	Whooping cough.....	72
		Windows, open, caution as to.....	24
		Wrappers.....	16

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U. S. DEPARTMENT OF LABOR
CHILDREN'S BUREAU

JULIA C. LATHROP, Chief

INFANT MORTALITY

RESULTS OF A FIELD STUDY
IN JOHNSTOWN, PA., BASED ON
BIRTHS IN ONE CALENDAR YEAR

BY

EMMA DUKE



INFANT MORTALITY SERIES No. 3

Bureau Publication No. 9



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CONTENTS.

	Page.
Letter of transmittal	5-9
Introduction	11-14
Relation of infant mortality to environment	14-26
Neighborhood incidence	14-20
Sanitary conditions—sewerage, pavements, and garbage collections	20, 21
Housing	21-26
Nationality	27-31
General nativity	27, 28
Serbo-Croatian	28, 29
Italian	29, 30
Slovak, Polish, etc	30
Other nationalities	30, 31
Stillbirths	31
Attendant at birth	32-34
Mothers	34-36
Literacy	34
Ability to speak English	34
Years in the United States	35
Age	35, 36
Baby's age at death and cause (disease) of death	36-38
Feeding	38-42
Sex	42, 43
Mother's household duties; cessation and resumption of	43-45
Economic factors	45-49
Earnings of father	45-47
Gainful work of mother	47-49
Illegitimacy	49
Reproductive histories	50-53

GENERAL TABLES.

Table I.—Distribution of births according to nationality of mother, by section of city and ward	57
Table II.—Distribution of births, live births, stillbirths, and deaths in first year, according to nativity of mother, by section of city and ward	58
Table III.—Distribution of births to native and foreign married mothers and number and per cent of births in each group to those gainfully employed, by section of city	59
Table IV.—Distribution of births to married mothers, according to attendant at birth and to nativity of mother, by section of city and ward	60
Table V.—Distribution of live births and of deaths during first year, according to number of persons and number of rooms per family	61
Table VI.—Distribution of births, live births, stillbirths, and of deaths during first year, according to nationality (detailed) of mother	62

	Page.
Table VII.—Distribution of births, live births, stillbirths, and of deaths during first year, according to attendant at baby's birth and nationality of mother..	63
Table VIII.—Distribution of deaths of infants at specified age, according to cause of death of infant and nativity of mother.....	64
Table IX.—Distribution of babies alive at beginning of each month from first to ninth, according to type of feeding during each month; number continuing such diet until following month; number changing to other specified type of feeding; number of deaths in each group in first year and also deaths at beginning of next month.....	65, 66
Table X.—Distribution of births to married wage-earning mothers, according to husband's annual earnings and nativity and earnings of mother.....	67
Table XI.—Distribution of results of reportable pregnancies (live births and stillbirths) and miscarriages, according to number per mother and nativity of mother.....	68, 69
Table XII.—Distribution of results of reportable pregnancies (live births and stillbirths) and miscarriages, according to number per mother and age of mother at each pregnancy.....	70, 71
Table XIII.—Distribution of results of reportable pregnancies (live births and stillbirths) and miscarriages, according to number per mother and husband's earnings.....	72-75
Table XIV.—Distribution according to number of pregnancies and age groups of married mothers classified by nativity.....	76
Table XV.—Distribution of married mothers by losses sustained, according to nativity of mother and number of possible losses.....	77

APPENDIXES.

Appendix I.—Statements of mothers	81-85
Appendix II.—Detailed description of method used for computing infant mortality rate for this report and comparison with conventional method....	86-88
Appendix III.—The milk supply.....	89-93

ILLUSTRATIONS.

Plates A to R.....	Follow page 93
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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF LABOR,
CHILDREN'S BUREAU,

Washington, August 24, 1914.

SIR: I transmit herewith a statement of the first study in the field inquiry contemplated by the Children's Bureau into the subject of infant mortality in the United States. This study was made in Johnstown, Pa., during the first year of the bureau's existence, and is submitted as the first item in a proposed series of studies into infant mortality to be made in a number of typical communities throughout the country.

The city of Johnstown was selected because of its interest as a type of town in which there are no large factories employing women and because its size and its good birth registration permitted a study by the staff which the bureau could at first assign to this work.

The subject of infant mortality was chosen, first, because of its obvious importance as recognized by the fact that it is the first subject mentioned in the law creating the bureau; second, because of its fundamental value to further work of the bureau; and third, because it was practicable to make a single study, complete in itself, which would yet form part of an integral whole as it became possible to extend the field inquiry.

The restricted and tentative character of this first study is recognized. Its results will be constantly compared and collated with those of following similar studies in other communities. Doubtless the method of the general field inquiry may be modified from time to time, but the essential basal material of the schedules will be comparable throughout.

Infant mortality is a subject of profound social importance. The modern view has ceased to be fatalistic; infant mortality is now regarded as a preventable waste, injurious to survivors as well as destructive to infants, and cruelly increasing the burden of rearing a family. Sir Arthur Newsholme, the great English authority, has said, "Infant mortality is the most sensitive index we possess of social welfare and of sanitary administration, especially under urban conditions." Nationally, the United States has as yet no means of measuring the extent and significance of its infant mortality. If it were practicable, it would be illuminating to visit each one of the

2,500,000 children who, it is estimated, are born in this country yearly, and to take note of the varying social and economic conditions under which some 300,000 of them die and the others survive. As this is manifestly impossible, the nearest approach is to consider certain communities typical of the whole, and it is believed that in the course of a few years' study such data can be presented as will give the United States a fairly adequate measure of the conditions under which American-born infants survive or perish, and of the possibilities of modifying those conditions by local action.

Brilliant work for infant welfare has been done in many localities, notably by the public-health authorities and volunteer organizations of the larger cities, and incidental thereto much information regarding infant mortality has been gathered; but in the greater part of the country, especially in the smaller cities and rural communities, it is as yet hardly recognized that the problems which confront the crowded quarters of the great cities may also exist in less congested areas.

In accordance with the plans for a general inquiry into infant mortality, Mr. Ethelbert Stewart, the first statistical expert of the Children's Bureau, directed the preparation of the schedule and the field work at Johnstown.

This study considers all the babies born in Johnstown within a single calendar year. Since the work was begun in January, 1913, it was necessary to select the year 1911 as the latest in which all babies born could have attained a full year of life.

Mr. Stewart preceded the agents by a visit to Johnstown in which he explained the purposes of the inquiry, and the courtesy with which the agents were received by the general public—the press, the clergy, civic and volunteer organizations, and especially by the mothers themselves—was a valuable factor in making the inquiry successful.

Above all, the bureau wishes to express its obligation to the mothers of Johnstown, without whose generous understanding and help the inquiry could not have been conducted. Their good will is evidenced by the fact that, out of 1,553 mothers visited, only two refused information. The readiness with which the information was given undoubtedly depended upon the appeal to the mothers to cooperate with the Government in the effort to learn how to save babies' lives and to the fact that the agents could show that the information given was not to be used in any personal way.

The schedules were taken by Miss Emma Duke, Miss Sophia Vogt, and Miss Emily Miladofsky, special agents of the bureau, while the preliminary work of transferring to the schedules the information contained on the State records of birth was done by Mr. A. V. Par-

sons, special agent of the bureau, who also took the photographs reproduced.

Just as the work of filling out the schedules was being completed in Johnstown, Mr. Stewart was transferred to the Bureau of Labor Statistics, and his loss, together with other bureau exigencies, delayed the completion of the report. Miss Emma Duke has written the text and she has had the assistance of Miss Sophia Vogt and Miss Ella A. Merritt in making the tabulations. Mr. Lewis Meriam, Assistant Chief of the Children's Bureau, was interested in the inquiry from the start, and on Mr. Stewart's transfer was placed in charge of the statistics. The bureau wishes to acknowledge its indebtedness to all those who have aided in the preparation of this study by preliminary advice and by criticism of the schedule or manuscript.

The method of the inquiry is in one respect unique, so far as we are aware. Instead of taking as its point of departure the death records of children who have not survived their first year, the birth records are first secured for all children born within a certain calendar year, and each child is then traced through the first 12 months of life, or as much of that period as he survives, in order to obtain information as to the conditions which surround all the children of the town born during the given year. It is evident that this inquiry can be carried on effectively only in communities which have birth registration, and its extension to include typical units throughout the country must depend largely upon the further extension of birth registration.

The law creating the bureau provided for no medical officer upon the staff, and the inquiry was necessarily restricted to a consideration of family, social, industrial, and civic factors. The original material of the schedule was secured through personal interviews between individual mothers and the women agents. As the text shows, certain facts regarding the civic surroundings of the families were secured in addition to the interviews, but the chief value of the inquiry lies in the information afforded by the mothers. It is plain, however, that a study thus limited must omit certain important considerations. It is not fair nor practicable to enter a home and ask questions regarding conditions which, if they exist, are considered personally humiliating. Hence it was necessary to omit questions bearing on matters of personal character or behavior, and therefore to omit all consideration of two recognized factors in infant mortality—alcoholism and venereal disease. It is anticipated that the bureau will be in a position later to consider these and other factors, notably those connected with the employment of mothers and with industrial diseases, by methods independent of family inquiry.

The emphasis of the inquiry, as shown throughout the text, was upon certain of the more obvious economic, social, and civic factors which have surrounded the lives of the children of Johnstown born

within the given year. Civic action can remedy defective sewerage and scavenger systems and dirty unpaved streets which are instrumental in creating conditions that endanger the lives of infants. The extension of city water to all houses; improved methods for sewage disposal, garbage collections, and general scavenging; the paving of streets and inhabited alleys; the widening of alleys; the improved grading of streets and alleys; the relief of house and lot congestion; the abolition of wells and yard privies; sewer connection for all houses; the abatement of the smoke nuisance—all of these are needed improvements for the infant health and the general health of Johnstown.

But the public's responsibility does not end merely in remedying such conditions as those just noted. There is a growing tendency on the part of municipalities to accept responsibility for furnishing information and instruction to its citizens. Some cities have reduced their infant mortality rate by having expectant mothers instructed in prenatal care; others by sending instructive visiting nurses, immediately after the birth of a child, into homes that need them. Other means which have been found effective in reducing excessive infant mortality rates are baby welfare stations, consultation stations for expectant and nursing mothers, and the distribution of sound literature on prenatal care, the care and feeding of infants, the care of milk, and other hygienic matters.

The importance of a pure milk supply in reducing infant mortality has been repeatedly demonstrated. The direct effects of impure milk on the health of Johnstown babies could not be ascertained in this investigation, but the careless handling of milk was obvious, and at the request of the Johnstown Board of Health and the local health officer the Children's Bureau secured the cooperation of the Bureau of Animal Industry of the Department of Agriculture in making a comprehensive investigation of the milk supply in Johnstown. The findings of the experts, L. B. Cook, C. E. Clement, and B. J. Davis, printed in full on pages 89 to 93 of this report (Appendix III), justify the citizens' campaign for clean milk now under way in Johnstown.

In many directions public spirit is active in Johnstown. The city is awakening to its needs and to its responsibilities as well. It supports a strong civic club and other associations which are studying ways and means to proceed. Its newspapers are virile and progressive and plans are being made to remedy insanitary conditions. Through private effort a visiting nurse has been secured to instruct mothers in the care of their homes and their children.

The Johnstown report shows a coincidence of underpaid fathers, overworked and ignorant mothers, and those hazards to the life of the offspring which individual parents can not avoid or control

because they must be remedied by community action. All this points toward the imperative need of ascertaining a standard of life for the American family, a standard which must rest upon such betterment of conditions of work and pay as will permit parents to safeguard infants within the household. Toward the slow working out of the essentials of such a standard it is hoped that the bureau's continued studies into infant mortality may contribute.

While the bureau has not yet determined upon all the units of the inquiry, it is the purpose at present to study localities outside those great urban areas whose spectacular needs have secured costly and effective work by municipal and volunteer organizations. Such work should be equally valuable and, on the whole, equally applicable in smaller towns and even in rural communities. That similar problems and needs exist also in our less congested areas is proved by the 1913 report of the New York State Health Commission, which has made plain the unfavorable health showing of the State as a whole as compared with that of the city of New York. This report and the studies upon which it is based have furnished the impetus for new legislation which extends throughout the State certain measures for improving the health of children which have already proved effective in the largest city of the State. In various parts of the world the history of intelligent efforts to surround babies with healthful conditions shows a progressively lessening infant mortality rate and leads to the belief that the problems of infant mortality can be solved.

Sir Arthur Newsholme, who has already been quoted above, says in the Forty-Second Annual Report of the Local Government Board (1912-13), "It is obvious that the complex problems involved (excessive infant and child mortality) can not be effectively stated in a single report, and that investigation is called for in nearly every center of excessive mortality."

It is therefore desired to pursue this inquiry in various typical communities throughout the country so that the facts may secure popular attention. Clearly the law creating the Children's Bureau, framed by experts in child welfare, embodies the conviction that if the Government can "investigate and report" upon infant mortality, the conscience and power of local communities can be depended upon for necessary action.

Respectfully submitted.

JULIA C. LATHROP, *Chief.*

Hon. WILLIAM B. WILSON,
Secretary of Labor.

INFANT MORTALITY : JOHNSTOWN, PA.

INTRODUCTION.

The term infant mortality, used technically, applies to deaths of babies under 1 year of age. An infant mortality rate is a statement of the number of deaths of such infants in a given year per 1,000 births in the same year. Some countries include stillbirths in making the computations, but this method is not generally followed in this country nor has it been followed in this report.

Ordinary procedure is to compare the live births in a single calendar year with the deaths of babies under 12 months of age occurring in that same year, even though those who died may not have been born within the calendar year of their death. The infant mortality rates in this report, however, have not been computed on the usual basis, but for the purpose of securing greater accuracy in measuring the incidence of death this bureau has considered, in making the computation, only so many of the babies born in the year 1911 as could be located by its agents, and has compared with this number the number of deaths within this group of babies who died within one year of birth, even though some of these deaths may have occurred during the calendar year 1912.¹

Infant mortality can be accurately measured in no other way than by means of a system of completely registering all births as well as all deaths. In 1911 the United States Bureau of the Census regarded the registration of deaths as being "fairly complete (at least 90 per cent of the total)" in 23 States, but the same degree of completeness in the registration of births was found only in the New England States, Pennsylvania, and Michigan, and in New York City and Washington, D. C. An exact infant mortality rate for the United States as a whole can not be computed owing to this generally incomplete registration. In the 1911 census report on mortality statistics,² however, the infant mortality rate is estimated at 124 per 1,000 live births. How this estimated rate compared with the computed rates for other countries is shown in the following summary:

¹ For more detailed description of method see Appendix II, pp. 86 to 88.

² Bulletin 112, Bureau of the Census, p. 23.

DEATHS OF CHILDREN UNDER 1 YEAR OF AGE PER 1,000 LIVE BIRTHS, BY QUENNIAL PERIODS FROM 1901 TO 1910, AND ALSO FOR THE SINGLE CALENDAR YEARS 1909 AND 1910.¹

COUNTRY.	1901 to 1905	1906 to 1910	1909	1910
Chile.....	306	315	315	30
Russia (European).....	(²)			
Austria.....	215			
Hungary.....	212	204	212	191
Prussia.....	190	168	164	15
Jamaica.....	174	191	174	12
Spain.....	173			
Ceylon.....	171	189	202	17
Italy.....	168		155	
Japan.....	154		166	
Servia.....	149			
Belgium.....	148		137	
Bulgaria.....	148			
France.....	139		120	
England and Wales.....	138	117	109	105
The Netherlands.....	136	114	99	103
Switzerland.....	134		115	
Finland.....	131	117	111	113
Scotland.....	120		108	
Denmark.....	119		98	
Province of Ontario.....	114	127	131	123
Ireland.....	98	94	92	95
Australian Commonwealth.....	97	78	72	75
Sweden.....	91		72	
Norway.....	81		72	
New Zealand.....	75	70	62	65

¹ From the Seventy-third Annual Report of the Registrar General of Births, Deaths, and Marriages in England and Wales (1910). London, 1912.

² Available only for the period from 1896 to 1900, when it was 261.

When it had been decided by the Children's Bureau to make infant mortality the subject of its first field study and to include all babies born in a given calendar year, regardless of whether they lived or died during their first year, advice and cooperation were enlisted of mothers, physicians, nurses, and others experienced in the care of children, and also of trained investigators and statisticians, in the preparation of a schedule which was submitted to them for criticism.

With its limited force and funds it was not possible for the Children's Bureau to extend its inquiries throughout the entire United States. It was therefore decided to make intensive studies of babies born in a single calendar year in each of a number of typical areas throughout the country that offered contrasts in climate and in economic and social conditions, the results to be eventually combined and correlated. It was necessary to restrict the choice of the first area to a place of such size as could be covered thoroughly within a reasonable time by the few agents available for the work.

Johnstown, Pa., was the first place selected. It is in a State where birth registration prevails, and hence a record of practically all babies could be secured; it is of such size that the work could be done by a small force within a reasonable period, and it seemed to present conditions that could with interest be contrasted with conditions typical of other communities. Moreover, the State commissioner of health and the State registrar of vital statistics were both

working zealously to enforce birth-registration laws; both were actively interested in reducing infant mortality, and they welcomed a study of the subject in their State. In Johnstown the mayor, the president of the board of health, the health officer, and other local officials all showed the same spirit of hearty cooperation and interest.

Inasmuch as the study was confined to babies born in a single calendar year and work was begun in January, 1913, the latest year in which the babies could have been born and still have attained at least one full year of life was 1911.

Work was begun on January 15, 1913, with the transcription from the original records at Harrisburg of the names and other essential facts entered on the birth certificates of babies born in 1911, and, if the baby had died during its first year of life, items on the death certificate were also copied.

In the meantime the people of Johnstown through the press, and through the clergy in the foreign sections, had been informed of the purpose and plan of the investigation. Without the friendly spirit thus aroused and the interest manifested by the Civic Club and other organizations the work could not have been brought to a successful issue. The investigation was absolutely democratic; every mother of a baby born in 1911, rich or poor, native or foreign, was sought, and it is interesting to note refusals were met with in but two cases.

The original plan was to limit the investigation to those babies born in the calendar year selected whose births had been registered, the purpose being to secure facts concerning a definite group and not to measure the completeness of birth registration. Shortly after beginning the work, however, agents of this bureau were told that the Servian women in Johnstown seldom had either a midwife or a physician at childbirth; that they called in a neighbor or depended upon their husbands for help at such times, or that they managed alone for themselves, and that therefore their babies usually escaped registration. The omission of these babies meant the exclusion of a number of mothers in a group that was too important racially to be omitted from an investigation embracing all races and classes. Accordingly a list of babies christened in the Servian Church and born in the year 1911 was secured and an attempt made to locate them. In addition an agent called at each house in the principal Servian quarter to inquire concerning births in 1911. A number of unregistered babies of Servian mothers were thus found and included in the investigation.

The agents were sometimes approached by mothers of babies born in 1911 who resented being omitted from the investigation simply for the reason that their babies' births had not been registered. The agents were therefore instructed to interview mothers thus accidentally encountered and to include their babies in the investigation. But no

additional baptismal records were copied nor was a house-to-house canvass made of the city; in fact, no further means were resorted to to locate unregistered babies for the purpose of including them in the investigation.

There were 1,763 certificates copied at Harrisburg, and 1,383 of the babies named in them were reached by the agents. In addition, 168 babies for whom there were no birth certificates, but who were located in the ways just noted, were included, making a total of 1,551 completed schedules secured.

Of the 380 not included in the investigation there were 149 who could not be located at all; 220 others had moved out of reach—that is, into another city or State; 6 of the mothers had died; 3 could not be found at home after several calls, and 2 refused to be interviewed.

From the following summary of data recorded on the certificates of the 380 unlocated babies just referred to it appears that the infant mortality rate (134.3) among them is almost the same as that (134) shown in Table 1 for babies included in the investigation. In reality, however, it is perhaps a little higher, as some of these babies no doubt died outside of Johnstown and their deaths were recorded elsewhere.

NATIONALITY OF MOTHER.	Total births.	Live births.	Still-births.	SEX OF BABY.		ATTENDANT AT BIRTH.			Certificate showing deaths during first year.
				Male.	Female.	Physician.	Midwife.	Unknown.	
Total.....:	380	350	30	227	153	158	189	33	47
Native.....	134	118	16	76	58	122	5	7	12
Foreign.....	246	232	14	151	95	36	184	26	35
Slovak, Polish, etc.....	43	41	2	27	16	4	37	2	3
Croatian and Servian.....	13	11	2	10	3	.....	7	6	5
Magyar.....	1	1	.....	1	.....	.....	1	.....	.....
German.....	8	8	.....	6	2	2	5	1	2
Italian.....	41	39	2	26	15	3	36	2	4
Syrian and Greek.....	7	6	1	3	4	3	4	.....	1
British.....	7	7	.....	3	4	5	2	.....	.....
Austrian (not otherwise specified).....	123	116	7	73	50	19	89	15	20
Not reported	3	3	.....	2	1	.....	3	.....	.....

RELATION OF INFANT MORTALITY TO ENVIRONMENT.

NEIGHBORHOOD INCIDENCE.

The rate of infant mortality is regarded as a most reliable test of the sanitary condition of a district. (Sir Arthur Newsholme, Elements of Vital Statistics, p. 120. London, 1899.)

Johnstown is a hilly, somewhat Y-shaped area of about 5 square miles which spreads itself out into long, narrow, irregularly shaped strips, detached by rivers and runs and steep hills. In some places it is not over a quarter of a mile wide, but its extreme length is

about 4 miles. The city is composed of 21 wards and is an aggregation of what were formerly separate unrelated boroughs or towns. The names of these different sections, together with the numerical designations of the wards included in or comprising them, are shown in the following table. This table gives for each section not only the total population according to the Federal census of 1910, but also the number of live-born babies included in the investigation and the number and proportion of deaths among such babies during their first year.

TABLE 1.—DISTRIBUTION OF POPULATION, LIVE BIRTHS, AND DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE ACCORDING TO SECTION OF JOHNSTOWN, FOR ALL CHILDREN INCLUDED IN THIS INVESTIGATION.

¹ Federal census of 1910.

² Total live births less than 50; have therefore considered too small to use in computing an infant mortality rate.

To learn where the babies die is perhaps the first step in solving the infant mortality problem. The modern health officer recognizes this and generally has in his office a wall map upon which are indicated sections, wards, city blocks, and sometimes even houses. As infant deaths are reported, pins are stuck in the map in the proper places, a density of pins on any part of the map indicating, of course, where deaths are most numerous, although the percentage of infant deaths may not be the highest. The next table shows the comparative frequency of infant deaths in each of the several sections of Johnstown as well as the rate of infant mortality, total population, proportion of foreign population, proportion of foreign mothers, and total births in the year 1911 in each.

TABLE 2.—RELATIVE RANK OF SECTIONS OF JOHNSTOWN, ACCORDING TO INFANT MORTALITY RATE FOR ALL CHILDREN INCLUDED IN THIS INVESTIGATION, TOTAL POPULATION, TOTAL FOREIGN BORN, PERCENTAGE OF FOREIGN BORN IN TOTAL POPULATION, NUMBER OF BABIES BORN ALIVE IN 1911, PROPORTION OF FOREIGN-BORN MOTHERS, AND NUMBER OF INFANT DEATHS.

SECTION OF CITY AND WARD.	RANK OF THE SEVERAL SECTIONS OF THE CITY ACCORDING TO—						
	Infant mortality rate.	Total population. ¹	Total foreign-born population. ¹	Per cent of foreign-born population. ¹	Babies included in investigation.		
					Number live born.	Proportion of foreign mothers.	Number of infant deaths.
Woodvale (ward 11).....	1	8	2	1	6	2	2
Prospect (ward 12).....	2	11	8	5	11	5	7
Cambria City (wards 15, 16).....	3	1	1	2	1	1	1
Hornerstown (ward 7).....	4	7	10	11	5	11	3
Minersville (ward 14).....	5	10	4	3	10	3	9
Conemaugh borough (wards 9, 10).....	6	6	3	4	4	4	4
Roxbury (ward 8).....	7	9	12	13	8	12	8
Moxham (ward 17).....	8	5	6	8	3	7	6
Morrellville (wards 18, 19, 20).....	9	4	7	9	2	6	5
Kernville (wards 5, 6).....	10	2	9	12	7	13	11
Down town (wards 1, 2, 3, 4).....	11	3	5	7	9	9	12
Peelerville (ward 13).....	(2)	12	11	6	13	10	13
Coopersdale (ward 21).....	(3)	13	13	10	12	8	10

¹ According to Federal census of 1910.

² Total live births less than 50; base therefore considered too small to use in computing an infant mortality rate.

The highest infant mortality rate, 271, is found in the eleventh ward, known as Woodvale, although this is neither the most populous ward nor the one having the largest number of births. The infant mortality rate here, however, is double the rate for the city as a whole and more than five times as great as it is for the most favorable ward.

This is where the poorest, most lowly persons of the community live—families of men employed to do the unskilled work in the steel mills and the mines. They are for the most part foreigners, 78 per cent of the mothers interviewed in this ward being foreign born.

Through Woodvale runs the main line of the Pennsylvania Railroad. To the north of the tracks rises a steep hill, toward the top of which is Woodvale Avenue, the principal street north of the railroad. (See plate A.) Sewer connection is possible for the houses along this avenue, as a sewer main has recently been installed, but the people have not in all cases gone to the expense of having the connection made, and in other cases where they have done so sometimes only the sinks are connected with the sewer and the yard privy is retained.

On the streets above Woodvale Avenue dwellings are more scattered and the appearance is more rural. A few of the families still have to depend upon more or less distant springs for their water, although city water is quite generally available throughout Woodvale.

The streets near the bottom of the hill, as Plum Street, for example, are so much below the level of the sewer mains that they can not be properly drained into the sewer. Private drain pipes from houses are buried a few feet below the surface and protrude from the sides of the hills, dripping with house drainage which flows slowly into ditches and forms slimy pools. (See Plates B and C.)

None of the streets on the north side of the railroad track are paved; sidewalks and gutters are lacking. In cold weather the streets are icy and slippery and even dangerous on account of the grade. In warm weather they are frequently slippery and slimy with mud.

Maple Avenue is the principal street of that part of Woodvale lying to the south of the railroad tracks, and it is the only properly paved and graded street in Woodvale. The streets on this side of the tracks, however, are not in as bad a condition as those to the north, nor are the drainage and general sewerage conditions as offensive as north of the tracks, but many of the streets are nevertheless muddy and filthy. (See Plate D.)

Prospect ranks next to Woodvale in infant mortality, having a rate of 200. This section, lying along a steep hill and above one of the big plants of the steel company, has not a single properly graded, drained, and paved street. The sewers are of the open-ditch type, and the natural slope of the land toward the river is depended upon for carrying off the surface water that does not seep into the soil. The closets are generally in the yard and are either dry privies or they are situated over cesspools. Some of the people who live on the lower part of the slope have wells sunk directly in the course of the drainage from above. (See Plate E.)

Cambria City, which is composed of the two most populous wards of Johnstown, has the third highest infant mortality rate, 177.4. It has a large foreign element, as is evidenced by the fact that 90.6 per cent of the mothers interviewed were foreign born. It is situated along the river, between the hills of Minersville and Morrellville, and somewhat to the north of Prospect. The sewage from other residential sections and from the steel mills above them empties into the river at this point. In warm, dry seasons the river is low, flows slowly, and forms foul-smelling pools.

Sewer connection is possible for most of the houses in Cambria City, although all are not connected. Some, on the streets bordering the river, have private drain pipes that empty out into the stream. Others have their kitchen sinks connected with the sewer but still retain yard privies, which, of course, are not sewer connected.

There is considerable crowding of houses on lots, rear houses being commonly built on lots intended for but one house. Density of population and house congestion are greater here than elsewhere in the city.

The streets of Cambria City are somewhat better graded and more generally paved than those of Woodvale, but muddy streets and unpaved sidewalks nevertheless exist here. Broad Street, however, which is the business thoroughfare and runs through the center of the section, is the widest and best constructed street in Johnstown. Bradley Alley, on the other hand, running the length of Cambria City and parallel to Broad Street, is the most conspicuous example in the city of a narrow lane or alley used as a residence street. A number of small dwellings, generally housing more than one family, have their frontage on this alley, which is 19 feet 10 inches in width and without sidewalks. It is unpaved and in bad condition, generally being either muddy or dusty and littered with bottles, cans, and other trash. (See Plates F and G.)

Hornerstown has an infant mortality rate of 156, ranking fourth among the several sections of Johnstown in this respect. It has a fairly prosperous and somewhat suburban appearance, but its comparatively high infant mortality rate can perhaps be partly accounted for by the bad street conditions and the fact that refuse of all sorts is dumped into the shallow river at this point.

Minersville is a district where a high rate would be expected from prevailing conditions. The rate is 125, or less than the average for the city but more than double that for the most favorable sections. This ward is built on a hill and so located that the rising clouds of grit-laden smoke from the steel mills envelop it much of the time. Only one street in this section is well paved, and this is seldom clean. Houses on some of the streets near the top of the hill are not sewer connected, and streams of waste water trickle down the hill and give rise to unpleasant odors. (See Plates H and I.)

Conemaugh Borough, with an infant mortality rate of 117.6, ranks sixth in this respect among the sections into which Johnstown has been divided. It comprises wards 9 and 10 and begins at the edge of the downtown section and spreads upward over the hills to the southwest. Some of the houses on streets near the top of the hill are not sewer connected, and streams of water constantly trickle down the numerous alleys and streets that descend the hill. (See Plate J.) This section makes a very unfavorable first impression because of the open drainage and of the many dirty, badly paved streets. (See Plate K.) Unlike some of the other wards, it has a rather evenly distributed population and is without the vast uninhabited areas and acutely congested spots found in some other sections. On the whole there is little crowding on the lots and there are many good-sized yards. One-third of the population is foreign born. Of these the Italians are the most numerous. Despite certain ugly spots this section has not the unwholesome atmosphere that characterizes Woodvale and to a lesser extent Prospect, Cambria City, and Minersville.

The infant mortality rate of 117.6 per thousand in Roxbury is the same as that of Conemaugh Borough. For reasons not plainly apparent the rate here is higher than in Moxham, Morrellville, Kernville, or the down-town section, although it appears to be as favorably conditioned as these sections are from a social, economic, and sanitary standpoint. Here, as in all these sections, however, are many conditions not conducive to health. For example, parts of Franklin Street are in bad repair. The roadway is full of ruts and holes; the street, which is seldom sprinkled, is dusty in dry weather and muddy in wet weather, and in front of good houses along one section of this street runs an open ditch that receives house drainage.

Moxham has the eighth highest infant mortality rate, it being 89.2. Conditions here are generally rather favorable, although there is some complaint that at "high water" the sewage received by one of the runs in this section backs into some of the houses and then the sinks and water-closets overflow. Some of the homes here, near the city limits, are not supplied with city water but are still dependent upon wells and springs.

One of the three wards constituting Morrellville (ward 18) has a rural appearance; there is little house crowding on lots, big yards are common, and the streets are not paved. It is, however, marred by an offensive open-ditch sewer. Ward 19 of Morrellville has a more finished, less rural appearance. One of its objectionable features is that house drainage and the bloody waste of slaughterhouses are emptied into a shallow stream that flows through it. Ward 20 adjoins ward 19, and although it spreads out into a suburb it appears for the most part to be a comfortable and busy little village. Strayer's Run winds about here and receives sewage. The fact that it is without a guardrail in some places and that the railing is inadequate in others makes it a source of danger, and according to common report such accidents as children falling into the stream have occurred. The infant mortality rate for Morrellville is 82.5.

Kernville, a section with a considerable proportion of prosperous people, has a very favorable infant mortality rate, it being 57.7. Parts of this section, however, are on a hill stretching upward from Stony Creek, which is both unsightly and offensive in warm weather and when the water is low.

The down-town section, i. e., wards 1, 2, 3, and 4, where are to be found many of the best conditioned houses, the homes of many of the well-to-do people, has the lowest infant mortality rate in the city, it being but 50.

No infant mortality rate is presented in the tables for Coopersdale or for Peelerville. In the first-named section only 36 live-born infants were considered, and 8 of them died in their first year. But this high rate need not be considered as especially significant, as

the base number is small for such a computation. Coopersdale, however, is a suburban-appearing community in which one would expect the infant mortality rate to be low.

Peelerville is that part of the thirteenth ward which adjoins Prospect. A number of company houses are located here in which sanitary conditions are fairly good. The ward seems to have good drainage and no sewage nuisances. It is a community of wage earners and not of prosperous homes. Only 18 babies are included in the report for this district, one of whom died. With such a small base the infant mortality rate is not significant. (See Plate L.)

SANITARY CONDITIONS—SEWERAGE, PAVEMENTS, GARBAGE COLLECTIONS.

The general inadequacy of the sewerage system which has been indicated for the city as a whole is due in part to the fact that the city is largely an aggregation of sections, formerly independent of Johnstown itself, which have been annexed at different periods. Some of these boroughs had sewer systems more or less developed when they were taken into Johnstown; others had none. Not only the sewage of Johnstown but that of outlying boroughs pollutes the two shallow rivers, the Conemaugh and the Stony Creek, that flow through Johnstown. These are burdened with more waste than they can properly carry away, and the deposits which are left on the rocks in various sections of both rivers create nuisances that are the subject of much complaint, especially during the warm summer months. (See Plates M, N, O, and P.) At various times agitation has been started to improve the rivers which, as they flow through Johnstown, are, at the low-water stage, little better than swamps of reeking slime from the waste matter emptied into them from the hundreds of sewers along their banks. The pipes through which waste matter is emptied into the streams go only to the river edge, leaving their mouths uncovered and making the river beds at times pools of slowly flowing filth. These unsightly, malodorous conditions could be remedied if pipes were extended out into the middle of the streams, where the water is deeper.

With the exception of sprinkling a few wagon loads of lime along the banks of the streams each year, the city has done nothing to abate the nuisances arising from the use of these rivers as sewers or to restrain the coal and steel companies from allowing the drainage from mines and mills to enter the streams.

The engineer's records show that Johnstown had in 1911 a total of 41.1 miles of sewers and 36 sewer outlets, and 82 miles of streets, 52.7 miles being paved. The alleys in Johnstown are generally inhabited. They are narrow and without sidewalks. Their length is 52.88 miles and 47.35 miles are unpaved. The combined length of streets and

alleys is 134.88 miles. A comparison of this combined length of streets and alleys with the 41.1 miles of sewers having 36 outlets shows the inadequacy of the sewer system.

Not only is there an absence of paving, but the roadways are in very bad condition. A protest by "A Citizen" in the Democrat of June 26, 1913, says that there are nine months in the year when it would be impossible for the proposed fire-department automobile engines to attend a fire in the seventh, eighth, eleventh, seventeenth, eighteenth, nineteenth, twentieth, and twenty-first wards owing to the condition of the streets.

The scavenger system is also very defective. Citizens are required to pay for the removal of their ashes, trash, and garbage. Garbage collections are not made by the municipality, but by private contractors, and any sort of receptacle, covered or uncovered, can or box, is pressed into service by householders. It is by no means uncommon to find streets and alleys littered with ashes, garbage, bottles, tin cans, beer cases, and small kegs. Dirty streets are by no means exceptional in Johnstown, even though the State of Pennsylvania has a law (act of Apr. 20, 1905) which provides for the punishment of any person who litters paved streets. It reads, in part, as follows (sec. 7 of Pamphlet Laws, 227):

From and after the passage of this act, it shall be unlawful, and is hereby forbidden, for any person or persons to throw waste paper, sweepings, ashes, household waste, nails, or rubbish of any kind into any street in any city, borough, or township in this Commonwealth, or to interfere with, scatter, or disturb the contents of any receptacle or receptacles containing ashes, garbage, household waste, or rubbish which shall be placed upon any of said paved streets or sidewalks for the collection of the contents thereof.

Any person or persons who shall violate any of the provisions of this act shall, upon conviction thereof before any magistrate, be sentenced to pay the cost of prosecution and to forfeit and pay a fine not exceeding \$10 for each offense, and in default of the payment thereof shall be committed and imprisoned in the county jail of the proper county for a period not exceeding ten days.

In a report on infant mortality to the registrar general of Ontario, 1910, Dr. Helen MacMurchy says: "Improve the water supply, the sewerage system, and the system of disposing of refuse; introduce better pavements, such as asphalt, and at once there is a decline in infantile mortality." All these are sanitary features in need of great improvement in Johnstown, and unquestionably a lowered infant mortality rate would reward any efforts for their betterment.

HOUSING.

In Johnstown the so-called "double" house predominates, usually frame. The double house is in reality two semidetached houses built upon a single lot. Rows of three or more houses of two, three, or

four rooms each are common, and they are known locally as three-family, or six-family houses, as the case may be. Sometimes these are "rear houses," that is, they are built behind other houses that face the street, on the same lots and in fact are approached by way of a narrow alley running alongside the house that has its frontage directly on the street. For this type of house water-closets or privies are often in rows in the yard or court that is used in common by all families. (See Plates Q and R.) In some places they are too few in number to permit each family to have the exclusive use of one.

Johnstown has three or four comparatively high-grade apartment houses, and in several office buildings rooms are rented to families for housekeeping. These are generally taken by native families.

In one of these office buildings the two lower floors are used for business purposes and the two upper floors are given over entirely to tenement purposes. From 40 to 50 families live here, many of whom have but one room. To serve the 20 or 25 families on each floor there is one bath and toilet room for men and another for women. Adjoining the toilet rooms is a small room containing garbage cans and trash receptacles for the use of the tenants.

The sanitary conditions in some of the best tenements or apartments, however, are not up to the standards of other cities, and in those occupied by the poorer people conditions are much worse than are usually permitted to exist in cities having large tenement houses in great numbers, where a tenement-house problem is recognized as such and active efforts are made by the municipality to improve conditions.

An absolute measure of the importance of each single housing defect in a high mortality rate can not be secured from this study. But it is not without interest to note that in homes where water is piped into the house the infant mortality rate was 117.6 per thousand, as compared with a rate of 197.9 in homes where the water had to be carried in from outdoors. Or that in the homes of 496 live-born babies where bathtubs were found the infant mortality rate was 72.6, while it was more than double, or 164.8, where there were no bathtubs. Desirable as a bathtub and bodily cleanliness may be, this does not prove that the lives of the babies were saved by the presence of the tub or the assumed cleanliness of the persons having them. In a city of Johnstown's low housing standards, the tub is an index of a good home, a suitable house from a sanitary standpoint, a fairly comfortable income, and all the favorable conditions that go with such an income.

The same trend of a high infant mortality rate in connection with other housing defects is noted in the next table.

TABLE 3.—DISTRIBUTION OF LIVE BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO HOUSING CONDITIONS.

HOUSING CONDITIONS.	Live births.	DEATHS DURING FIRST YEAR.	
		Number.	Infant mortality rate.
Total.....	1,463	196	134.0
Dry homes.....	808	99	122.5
Moderately dry homes.....	336	47	139.9
Damp homes.....	319	50	156.7
Bath.....	496	36	72.6
No bath.....	965	159	164.8
Not reported.....	2	1	(1)
Water supply in house.....	1,173	138	117.6
Water supply outside.....	288	57	197.9
Not reported.....	2	1	(1)
City water available.....	1,333	176	132.0
City water not available.....	128	19	148.4
Not reported.....	2	1	(1)
Yard clean.....	801	80	99.9
Yard not clean.....	632	107	169.3
No yard.....	28	8	(1)
Not reported.....	2	1	(1)
Water-closet.....	739	80	108.3
Yard privy.....	722	115	159.3
Not reported.....	2	1	(1)

1 Total live births less than 50; base therefore considered too small to use in computing an infant mortality rate.

The following summary may be of interest in indicating some relation between infant mortality and cleanliness or uncleanness combined with dryness or dampness of homes:

TABLE 4.—DISTRIBUTION OF LIVE BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO CLEANLINESS AND DRYNESS OF HOME.

TYPE OF HOME.	Live births.	DEATHS DURING FIRST YEAR.	
		Number.	Infant mortality rate.
All types.....	1,463	196	134.0
Clean.....	943	107	113.5
Moderately clean.....	354	58	163.8
Dirty.....	166	31	186.7
Dry.....	807	99	122.7
Damp.....	656	97	147.9
Clean:			
Dry.....	581	61	105.0
Damp.....	362	46	127.1
Moderately clean:			
Dry.....	158	27	170.9
Damp.....	196	31	158.2
Dirty:			
Dry.....	68	11	161.8
Damp.....	98	20	204.1

Dirt is doubtless unhealthful, but the amount of ill health or the number of infant deaths caused by a home being dirty can hardly be measured, when, as is usually the case, the dirt is accompanied by so many other bad conditions arising from poverty. For example, a home in close proximity to railroad tracks or mills whose stacks send forth clouds of soot, smoke, and ashes is generally the poorly built home of those who have neither time nor means to secure and retain cleanliness under such difficulties.

Overcrowding in homes is another factor the relative importance of which can not be exactly determined, because of its close connection with other ills. But the degree of overcrowding is greatest in the small cheaper houses, those of one, two, three, or four rooms. The average number of persons per room in the homes of all live-born babies for whom the data were secured was found to be 1.38. Homes of four rooms were more numerous than those of any other size and they housed an average of 1.58 persons per room. The number of babies in homes of various sizes with the number of persons per room for homes of each size was as follows:

TABLE 5.—NUMBER OF BABIES LIVING IN HOMES OF EACH SPECIFIED SIZE, AND AVERAGE NUMBER OF PERSONS PER ROOM IN HOMES OF EACH SIZE.

SIZE OF HOME.	Live-born babies.	Persons per room.	SIZE OF HOME.	Live-born babies.	Persons per room.
All homes.....	1,463		8 rooms.....	43	0.83
1 room.....	33	4.42	9 rooms.....	22	.93
2 rooms.....	165	2.27	10 rooms.....	4	.88
3 rooms.....	147	1.83	11 rooms.....	4	.64
4 rooms.....	526	1.58	12 rooms.....	1	.75
5 rooms.....	222	1.22	13 rooms.....	1	.69
6 rooms.....	233	1.07	14 rooms.....	2	.43
7 rooms.....	38	.96	Not reported.....	22	.....

In homes of one, two, three, or four rooms or where the number of occupants ranged from 4.42 to 1.58 persons per room the infant mortality rate was 155, as compared with a rate of but 101.8 in larger homes, where the number ranged from 1.22 to 0.43 persons per room.

The 1910 census returns show that the greatest overcrowding was in ward 15, where the average number of persons per dwelling was 9.9. Wards 16, 11, and 14 came next with rates of 8.3, 7.7, and 7.2, respectively. The infant mortality rate for these four wards is 190.2, which is over one-third more than the rate for the whole city.

The mortality rate among infants who slept in a room with no other person than their parents was much lower than among those who slept in a room with more than two persons. The babies that slept in separate beds also had a much lower infant mortality rate than those who did not sleep alone, as shown in the next table.

TABLE 6.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR AMONG BABIES SURVIVING AT LEAST 1 MONTH, AND INFANT MORTALITY RATE, ACCORDING TO CERTAIN CONDITIONS IN BABY'S SLEEPING ROOM.

CONDITIONS IN BABY'S SLEEPING ROOM.	BABIES WHO LIVED AT LEAST 1 MONTH.		
	Total.	Deaths during first year.	
		Number.	Rate per 1,000 of those who lived 1 month.
Total.....	1,389	122	87.8
Number of others sleeping in same room with baby:			
2 or less.....	600	40	66.7
3 to 5.....	725	71	97.9
Over 5.....	57	7	122.8
Not reported.....	7	4	(1)
Baby sleeping alone in separate bed:			
Yes.....	575	32	55.7
No.....	810	88	108.6
Not reported.....	4	2	(1)

¹ Total number of babies less than 50; base therefore considered too small to use in computing rate.

In presenting statistics on sleeping and ventilation, only the babies who lived at least one month have been considered, for the reason that so many deaths during the first month of life were due to prenatal causes.

The incidence shown in the foregoing table is significant, even though it can by no means be deduced therefrom that the health of a large proportion of babies was so impaired by sleeping with older and more or less unhealthy persons that death resulted. But irregular night feeding and overfeeding are undoubtedly harmful, and the mother is tempted to subject the baby to this when it sleeps with her and disturbs her rest.

Of the 1,389 babies who lived at least one month, 600, or 43.2 per cent, lived in homes where the baby slept in a room with not more than two other persons. The fact that the baby slept in a room with no more persons than its parents generally argues that the family's means permitted them to have one or more additional rooms for other members of the family, but in other cases, of course, merely that there were no other persons in the family.

Almost every home visited had means for good ventilation of the baby's room at night, yet but 604, or 43.5 per cent, of the 1,389 babies who lived at least a month slept at night in well-ventilated rooms—that is, in rooms where, according to the mother's statement, a window was open all night. Some mothers opened windows when the weather was neither cold nor damp; or opened them in a hall or room adjoining that where the baby slept; others emphatically stated

that at night the windows were “always shut tight.” The babies subjected to differences of ventilation show corresponding variations in infant mortality rates.

TABLE 7.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE AMONG BABIES SURVIVING AT LEAST 1 MONTH, ACCORDING TO VENTILATION OF BABY'S ROOM.

VENTILATION OF BABY'S ROOM.	BABIES WHO LIVED AT LEAST 1 MONTH.		
	Total.	Died during first year.	
		Number.	Rate per 1,000 of those who lived 1 month.
Total.....	1,389	122	87.8
Good.....	604	17	28.1
Fair.....	392	36	91.8
Poor.....	390	66	169.2
Not reported.....	3	3	(¹)

¹ Total number of babies less than 50; base therefore considered too small to use in computing rate.

A high death rate in badly ventilated homes can not be charged wholly to bad air. The mother who did not, or could not, provide proper ventilation was generally the mother without the means or the knowledge necessary to enable her to care for her baby properly in other respects, and yet the marked differences suggest that ventilation is itself a very important ally of the baby in its first year of struggle for existence.

In many rooms that were poorly ventilated, windows were not opened for the reason that the room was not properly heated and the houses themselves were flimsy and drafty. The problem in such houses is to keep warm. If the windows were frequently or constantly opened, the houses would be too cold to live in. In some localities the outside air is so laden with soot, ashes, dirt. and smoke that every effort is made to keep it out of the house.

The foreigners, who generally have the most miserable homes, are not dirty people who select bad living conditions through innate poor judgment, low standards, and lack of taste. The squalid homes which housed the natives and later the Germans and the Irish until the present type of immigrants came to do the more poorly paid work were the only homes available within the purchasing power of their low wages. The new immigrants demanded practically nothing and the owners did practically nothing in the matter of improving these homes, which naturally became more and more squalid as time went on. An excessive infant mortality rate and insanitary homes in unhealthful sections were found to be coexistent.

NATIONALITY.

GENERAL NATIVITY.

The investigation embraced 860 babies of native mothers (of whom 6 were negroes) and 691 babies of foreign mothers, making a total of 1,551. The infant mortality rate for the entire group was 134 per 1,000 live births; for the babies of native mothers 104.3, and for those of foreign mothers 171.3. The stillbirth rate for native mothers having children in 1911 was less than that for foreign mothers, being 52.3, as compared with 62.2 per 1,000 total births.

The line between the natives and foreigners is very sharply drawn in Johnstown. The native population as a rule knows scarcely anything about the foreigners, except what appears in the newspapers about misdemeanors committed in foreign sections. The report of the Immigration Commission¹ comments "on the attitude of the police department toward foreigners * * * with regard to Sunday desecration," and states that "the Croatians are accustomed to spend Sunday in singing, drinking, and noisy demonstrations. The police have been instructed to show no leniency on account of ignorance of the municipal regulations, and, without any attempt at explaining the laws, they arrest the offenders in large numbers." Again, it states: "They are arrested more often for crimes that make them a nuisance to the native population than for mere infractions of the law * * *. Few arrests are made for immorality among foreigners." "Sabbath desecration" is the crime foreigners are most frequently charged with.

Foreigners are employed largely in the less skilled occupations of the steel mills, which operate 24 hours a day, seven days a week. At the time the investigation was made some of the men in the steel mills worked for a period of two weeks on a night shift of 14 hours, then two weeks on a day shift of 10 hours, and back again to the night shift of 14 hours for another two weeks, and so on. When shifts were changed, one group of men was required to work throughout a period of 24 hours instead of for the usual 10 or 14 hour period and another group had 24 hours off duty. Some departments of the steel mills, however, shut down on Sundays, and in some departments for certain occupations an eight-hour day prevails, but these more favorable conditions do not prevail among the majority of the unskilled foreign workers whose homes were visited.

The foreigners who work on a 24-hour shift in a mill on one Sunday frequently "desecrate" their alternate free Sabbath by "singing, drinking, and noisy demonstrations," in spite of the known danger

¹ United States Immigration Commission Reports, Volume VIII, "Immigrants in Industries: Part 2, Iron and Steel Manufacturing in the East," p. 387. Reference is to Johnstown and is a very true picture of various immigrant institutions and of the comparative progress and assimilation of different races there. Although the immigration report was made five years before our investigation, conditions remain practically the same.

of arrest for "crimes that make them a nuisance to the native population" or for "Sabbath desecration," laws concerning which are strictly enforced in Johnstown; for example, children are not permitted to play in public playgrounds on Sunday and mercantile establishments are required to be closed on that day. Also, it is "unlawful for any person or persons to deliver ice cream, or to sell or deliver milk from wagon or by person carrying same, within the city on the Sabbath day, commonly called Sunday, after 12 o'clock m." The ordinance from which the foregoing sentence was quoted became a law on January 25, 1914.

SERBO-CROATIAN.

The foreign group having the highest infant mortality rate is the Serbo-Croatian¹ where, as shown in the next table, infant deaths numbered 263.9 per 1,000 live births.

TABLE 8.—DISTRIBUTION OF BIRTHS, LIVE BIRTHS, AND DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO NATIONALITY OF MOTHER.

NATIONALITY OF MOTHER.	Total births.	Total live births.	DEATHS DURING FIRST YEAR.	
			Number.	Infant mortality rate.
All nationalities.....	1,551	1,463	196	134.0
Native.....	860	815	85	104.3
Foreign.....	691	648	111	171.3
Slovak, Polish, etc.....	394	367	65	177.1
Serbo-Croatian.....	76	72	19	263.9
Italian.....	75	71	13	183.1
German.....	53	47	6	(1)
Magyar.....	38	38	4	(1)
British.....	33	31	4	(1)
Syrian and Greek.....	12	12		
Hebrew.....	10	10		

¹ Total live births less than 50; base therefore considered too small to use in computing an infant mortality rate.

The men of the Serbo-Croatian group are fine looking and powerful and are employed in the heavy unskilled work of the steel mills and the mines. They greatly outnumber the women of their race in Johnstown, and a man with a wife frequently becomes a "boarding boss"; that is, he fills his rooms with beds and rents out sleeping space to his fellow countrymen at from \$2.50 to \$3 a month each.

¹ A distinct and homogenous race, from a linguistic point of view, among Slavic peoples. They are divided into the groups "Croatian" and "Servian," on political and religious grounds, the former being Roman Catholics and the latter Greek Orthodox. Their spoken language is the same but they can not read each other's publications, for the Croatians use the Roman alphabet, or sometimes the strange old Slavic letters, while the Servians use the Russian characters fostered by the Greek Church.

Three Krainers have also, for convenience, been included in this group. Krainers are Slovenians from the Austro-Hungarian Province of Carniola and are designated "close cousins of the Croatians but with a different though nearly related language" by Emily Greene Balch in her book entitled "Our Slavic Fellow Citizens."

The same bed and bedding is sometimes in service both night and day to accommodate men on the night and the day shifts of the steel mills.

The wife, without extra charge, makes up the beds, does the washing and ironing, and buys and prepares the food for all the lodgers. Usually she gets everything on credit and the lodgers pay their respective shares biweekly. These conditions exist to some extent among other foreigners, but are not as prevalent among other nationalities in Johnstown as among the Serbo-Croatians.

In a workingman's family, it is sometimes said, the woman's work-day is two hours longer than the man's. But if this statement is correct in general, the augmentation stated is insufficient in these abnormal homes where the women are required to have many meals and dinner buckets ready at irregular hours to accommodate men working on different shifts.

The Serbo-Croatian women who, more than any of the others, do all this work are big, handsome, and graceful, proud and reckless of their strength. During the progress of the investigation, in the winter months, they were frequently seen walking about the yards and courts, in bare feet, on the snow and ice-covered ground, hanging up clothes or carrying water into the house from a yard hydrant.

Whether it harmed them to expend their force and vigor as they did could not be determined in individual cases, but their babies are the ones who died off with the greatest rapidity, their infant mortality rate being 263.9, as compared with the rates of 171.3 for all the foreign; 104.3 for the natives; and 134 for the entire group as shown in Table 8. Excluding babies of Serbo-Croatian mothers, the infant mortality rate for babies of foreign mothers is but 159.7.

ITALIAN.

The Italian mothers visited in Johnstown bore 75 children in 1911, 4 being stillborn. The infant mortality rate among the live born was 183.1, the highest of any racial group excepting the Serbo-Croatian, where it was 263.9.

The Italians have been in Johnstown somewhat longer than the Serbo-Croatians and they seem to have a little firmer grip on the community life there. Their homes are a shade better, a trifle cleaner, and somewhat less crowded than those of the Serbo-Croatians, although their hygienic standards seem little if any higher and they rank no better in literacy. The women do not perform the arduous duties that are the lot of so many of the Serbo-Croatian women; they have not the robust physique of the latter and the men are not found in those branches of the steel industry which require the extraordinary strength possessed by the Serbo-Croatians. The occupations of the Italian fathers were found to be more diversified than those of the Serbo-Croatians, some being fruit, grocery, or cheese merchants;

steamship agents; bricklayers, carpenters, or workers at other skilled and semiskilled trades.

SLOVAK, POLISH, ETC.

The infant mortality rate in the group designated "Slovak, Polish, etc.," is 177.1. In this group are included all the Slavic races represented in the investigation excepting the Serbo-Croatian. The babies of Slovak¹ mothers were found to be most numerous, there being 276 of them. There were 108 babies of Polish,² 2 of Bohemian,³ and 7 of Ruthenian⁴ mothers. In addition, one baby of a Scandinavian (Danish) mother was included, not because Scandinavians bear the least racial resemblance to the Slavic races, but because the few Scandinavians in Johnstown happened to be on about the same economic footing as the "Slovak, Polish, etc."

The rate for this group is lower than that for either the Serbo-Croatians or the Italians, but it is nevertheless very high and one exceeded by only a few European countries, as shown by the table on page 12.

Some of the "Slovaks, Poles, etc.," live in the same squalid sections as the Serbo-Croatians, and in the same type of inferior houses, but on the whole they have been in Johnstown longer, are more prosperous, and are therefore beginning to move from Cambria City and Woodvale, where formerly practically all lived, into more desirable sections. Those who have been in this country longest and intend to stay here are buying homes with large yards in the less crowded sections and are raising vegetables and flowers. Others, however, still remain in poor neighborhoods and sometimes buy houses there for from \$300 to \$600 each, built close together on rented ground.

Lodgers are by no means uncommon among the people in this group, but usually their homes are cleaner, less crowded, and possessed of more comforts than those of the Serbo-Croatians and Italians.

OTHER NATIONALITIES.

The British⁵ infant mortality rate in Johnstown is 129 and the German 127.7. The British and Germans in Johnstown are more prosperous than the Slavic, Magyar, Jewish, Italian, Syrian, and Greek peoples, and regard the others as "foreigners." It was strange

¹ Slovaks occupy practically all except the Ruthenian territory of northern Hungary; also found in great numbers in southeast Moravia. They are the Moravians conquered by Hungary. In physical type no dividing line can be drawn between Slovaks and Moravians. It is often claimed that Slovak is a Bohemian dialect.

² The west Slavic race native to the former Kingdom of Poland. For the most part they adhere to the Roman rather than the Greek Orthodox Catholic Church.

³ The westernmost division or dialect of the Czech and the principal people or language of Bohemia. Czech is the westernmost race or linguistic division of the Slavic (except Wendish, in Germany), the race or people residing mainly in Bohemia and Moravia.

⁴ Also known as Little Russians; live principally in southern Russia; also share Galicia with the Poles but greatly surpassed by Poles in number. In language and physical type resemble Slovaks. Generally Greek Orthodox, but a few are Greek Catholics of the Roman Catholic Church, whose priests marry, and are separated from other Roman Catholics by marked religious differences.

⁵ English, Irish, Scotch, and Welsh included in the term British.

to hear a man, one who could hardly speak English, say, “We are not foreigners; we are Germans.” The British and Germans occupy the same relative position economically that they occupy in the infant mortality scale with relation to other races.

In the Magyar ¹ group, of 38 babies born alive 4 died in their first year, making an infant mortality rate of 105.3, which is almost as low as that for babies of native mothers. The Magyars are little if any better off than the other “foreigners” among whom they live, but they possess somewhat higher standards of living. They live in poor neighborhoods and have inferior houses, but their homes are cleaner and they themselves somewhat more alert, personally cleaner, and less illiterate than the other foreigners.

There were but 10 babies of Hebrew mothers and 12 of Syrian and Greek mothers; among these there were no deaths. These groups are too small numerically to be significant in a comparative race study of infant mortality.

STILLBIRTHS.

In all there were but 88 stillbirths included in the investigation. They were more numerous proportionately among the Germans than among the mothers of any of the other nationalities. No single nationality group, however, has a very large representation, and hence a comparison of the rate for one with that for another nationality is not as significant as the difference in rate between native and foreign mothers. Although a special study of the causes of stillbirths was not made in connection with a study of deaths of infants during their first year of life, nevertheless the incidence of these births among the different nationality groups is believed to be of some interest, and therefore shown in the next table.

TABLE 9.—DISTRIBUTION OF BIRTHS AND OF STILLBIRTHS, AND RATE OF STILLBIRTHS PER 1,000 BIRTHS, ACCORDING TO NATIONALITY OF MOTHER.

NATIONALITY OF MOTHER.	Total births.	STILLBIRTHS.	
		Number.	Rate per 1,000 births.
All nationalities.....	1,551	88	56.7
Native.....	860	45	52.3
Foreign.....	691	43	62.2
Slovak, Polish, etc.....	394	27	68.5
Serbo-Croatian.....	76	4	52.6
Italian.....	75	4	53.3
German.....	53	6	113.2
Magyar.....	38		
British.....	33	2	60.6
Syrian and Greek.....	12		
Hebrew.....	10		

¹ The race of Finno-Tatar origin that invaded Hungary about the ninth century and is now dominant here; commonly called Hungarians.

ATTENDANT AT BIRTH.

The native mother usually had a physician at childbirth; the foreign-born, a midwife. The more prosperous of the foreign mothers, however, departed from their traditions or customs and had physicians, while the American-born mothers, when very poor, resorted to midwives. The midwives usually charged \$5, and sometimes only \$3; they waited for payment or accepted it in installments, and they performed many little household services that no physician would think of rendering.

TABLE 10.—NUMBER AND PER CENT OF BIRTHS ACCORDING TO ATTENDANT AT BIRTH AND NATIVITY OF MOTHER.

NATIVITY OF MOTHER.	ALL BIRTHS.		MOTHER ATTENDED BY—							
			Physician.		Midwife.		Neighbor, relative, or friend.		No one.	
	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
All.....	1,551	100.0	928	59.8	588	37.9	14	0.9	21	1.4
Native mothers.....	800	100.0	774	90.0	84	9.8	2	0.2	.....	.....
Foreign mothers.....	691	100.0	154	22.3	504	72.9	12	1.7	21	3.0

Two-thirds of those having no attendant were Serbo-Croatians. It was a Polish woman, however, who gave the following account of the birth of her last child:

At 5 o'clock Monday evening went to sister's to return washboard, having just finished day's washing. Baby born while there; sister too young to assist in any way; woman not accustomed to midwife anyway, so she cut cord herself; washed baby at sister's house; walked home, cooked supper for boarders, and was in bed by 8 o'clock. Got up and ironed next day and day following; it tired her, so she then stayed in bed two days. She milked cows and sold milk day after baby's birth, but being tired hired some one to do it later in week.

This woman keeps cows, chickens, and lodgers; also earns money doing laundry and char work. Husband deserts her at times; he makes \$1.70 a day. A 15-year-old son makes \$1.10 a day in coal mine. Mother thin and wiry; looks tired and worn. Frequent fights in home.

The infant mortality rate was lower for babies delivered by physicians than for those delivered by midwives or for those at whose birth no properly qualified attendant was present. This is not necessarily an indication of the quality of the care at birth, although in some cases the inefficiency of the midwife may have directly or indirectly caused deaths, just as in some instances a physician's inefficiency may have caused them. The midwife, however, is resorted to by the poor, and in their homes are found other conditions that create a high infant mortality rate.

TABLE 11.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO ATTENDANT AT BIRTH AND NATIVITY OF MOTHER.

ATTENDANT AT BIRTH AND NATIVITY OF MOTHER.	Total live births.	DEATHS DURING FIRST YEAR.	
		Number.	Infant mortality rate.
All births.....	1,463	196	134.0
Physician in attendance.....	866	87	100.5
Native mothers.....	730	68	93.2
Foreign mothers.....	136	19	139.7
Midwife in attendance.....	562	101	179.7
Native mothers.....	83	15	180.7
Foreign mothers.....	479	86	179.5
Other person or no attendant.....	35	8	(1)
Native mothers.....	2	2	(1)
Foreign mothers.....	33	6	(1)

1 Total live births less than 50; base therefore considered too small to use in computing an infant mortality rate.

Frequently the Serbo-Croatian women dispense altogether with any assistance at childbirth; sometimes not even the husband or a neighbor assists. Over 30 per cent of the births among the women of this race took place without a qualified attendant. More than one-half of those delivered by midwives, less than one-fifteenth of those delivered by physicians, and about one-fifth of those delivered without a qualified attendant had babies who died in their first year of life, as shown in the next tabulation:

TABLE 12.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR, ACCORDING TO ATTENDANT AT BIRTH, FOR BABIES OF SERBO-CROATIAN MOTHERS.

ATTENDANT AT BIRTH.	ALL BIRTHS TO SERBO-CROATIAN MOTHERS.		Live births.	Deaths during first year.
	Number.	Per cent.		
Total	76	100.0	72	19
Physician.....	31	40.8	28	2
Midwife.....	22	28.9	21	12
Other person.....	9	11.8	9	2
No one.....	14	18.4	14	3

Fifteen of the 19 Serbo-Croatian women whose babies died under 1 year of age kept lodgers.

In Johnstown the midwife is resorted to principally by the poor. Recent laws that the State is now trying to enforce require that the standard for the practice of midwifery be raised. If this can be done midwives might become definitely helpful persons in the community. One or two of the intelligent graduate midwives in Johnstown have

been an educational force among the foreign mothers for some years past. On the other hand there were others who were so dirty and so ignorant that they were a menace to the public health.

MOTHERS.

LITERACY.¹

There are differences in the infant mortality rate between the babies of literate and the babies of illiterate mothers; between those with mothers who can speak English and those with mothers who can not; and between babies of the mothers who have been in this country for a considerable period and those of the newer arrivals. Comparisons of this nature are confined to the foreign mothers, as only three cases of illiteracy were found among native mothers, and the other comparisons would not, of course, be applicable in any case to native mothers.

The next table shows that the infant mortality rate among the children of illiterate foreign mothers was 214, or 66 per thousand greater than the rate among literate foreign mothers.

TABLE 13.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR, INFANT MORTALITY RATE, AND NUMBER AND PER CENT OF STILLBIRTHS, ACCORDING TO LITERACY OF FOREIGN MOTHERS.

LITERACY OF FOREIGN MOTHERS.	Total births.	Live births.	STILLBIRTHS.		DEATHS DURING FIRST YEAR.	
			Number.	Per cent.	Number.	Infant mortality rate.
Foreign mothers.....	691	648	43	6.2	111	171.3
Literate.....	445	419	26	5.8	62	148.0
Illiterate.....	246	229	17	6.9	49	214.0

ABILITY TO SPEAK ENGLISH.

The next table shows that babies whose mothers can not speak English were characterized by a more unfavorable infant mortality rate than other babies.

TABLE 14.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR, INFANT MORTALITY RATE, AND NUMBER AND PER CENT OF STILLBIRTHS, ACCORDING TO ABILITY OF FOREIGN MOTHER TO SPEAK ENGLISH.

ABILITY TO SPEAK ENGLISH.	Total births.	Live births.	STILLBIRTHS.		DEATHS DURING FIRST YEAR.	
			Number.	Per cent.	Number.	Infant mortality rate.
Foreign mothers.....	691	648	43	6.2	111	171.3
Speak English.....	263	247	16	6.1	36	145.7
Can not speak English.....	428	401	27	6.3	75	187.0

¹ By literacy is meant ability to read and write in any language and not simply in English.

YEARS IN THE UNITED STATES.

In addition to a consideration of the babies according to their mothers' ability to speak English, it is of interest to note the infant mortality rates among babies whose mothers have been in this country for different periods of time.

TABLE 15.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO LENGTH OF RESIDENCE OF FOREIGN MOTHER IN THE UNITED STATES.

YEARS IN THE UNITED STATES.	Total live births.	DEATHS DURING FIRST YEAR.	
		Number.	Infant mortality rate.
Foreign mothers.....	648	111	171.3
5 years or less.....	168	36	214.3
Over 5 years.....	480	75	156.3

The high infant mortality rate for the children of newer immigrants, illiterates, and those who can not speak English is perhaps affected by the fact that they are at the same time generally of the poorest families and are housed in the most insanitary and unhealthful part of the city.

AGE.

The age of the mother is frequently believed to be a factor in the health of the child. The highest infant mortality rate was found to be that for the group of babies with mothers over 40 years of age, and the lowest for babies of mothers from 20 to 24 years of age.

TABLE 16.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR, INFANT MORTALITY RATE, AND NUMBER AND PER CENT OF STILLBIRTHS, ACCORDING TO AGE OF MOTHER.

AGE OF MOTHER.	Total births.	Live births.	STILLBIRTHS.		DEATHS.	
			Number.	Per cent of total.	Number.	Infant mortality rate.
All mothers.....	1,551	1,463	88	5.7	196	134.0
Under 20.....	105	95	10	9.5	13	136.8
20 to 24.....	476	454	22	4.6	55	121.1
25 to 29.....	410	391	19	4.6	56	143.2
30 to 39.....	480	449	31	6.5	61	135.9
40 and over.....	81	74	6	7.5	11	148.6

The youngest mothers have a higher stillbirth rate than other mothers, and the oldest group of mothers has the next highest rate. In this connection not only the foregoing table is of interest, but

also Table XII on page 70, based upon the entire reproductive histories of the mothers included in this study. As all the children borne by these mothers are included, the base numbers in the latter table are larger and the figures therefore somewhat more significant.

BABY'S AGE AT DEATH AND CAUSE (DISEASE) OF DEATH.

A baby who comes into the world has less chance to live one week than an old man of 90, and less chance to live a year than one of 80.—*Bergson.*

The most dangerous time of life is early infancy; even old age seldom has greater risk. Death strikes most often in infancy. The Johnstown babies died during their first year of life at the rate of 134 per 1,000 born alive, and they paid their heaviest toll in their very earliest days. If the total of 196 deaths had been distributed evenly throughout the 12 months, 8.3 per cent of the babies would have died each month and 25 per cent during each quarter. But instead of that 37.8 per cent died in the first month; 9.2 per cent in the second, and 8.2 per cent in the third, or over 55 per cent in the first quarter.

TABLE 17.—NUMBER AND PER CENT DISTRIBUTION OF DEATHS OF BABIES, BY AGE AT DEATH.

AGE AT DEATH.	DEATHS OF BABIES OF ALL MOTHERS.	
	Number.	Per cent distrib- ution.
Total deaths in first year.....	196	100.0
First quarter.....	108	55.1
First month.....	74	37.8
First week.....	45	23.0
Less than 1 day and 1 day.....	30	15.3
2 days.....	4	2.0
3 to 6 days.....	11	5.6
Second week.....	14	7.1
Third week.....	7	3.6
Fourth week.....	8	4.1
Second month.....	18	9.2
Third month.....	16	8.2
Second quarter.....	42	21.4
Third quarter.....	31	15.8
Fourth quarter.....	15	7.7

The large number of deaths in the first few hours or days of life indicates that many babies are born with some handicap and that in many instances the mother has been subjected to some condition which resulted in the birth of a child incapable of withstanding the ordinary strain of life. Of the 45 babies who died in Johnstown less than a week after birth, 38 died of prematurity, congenital debility or malformations, or injuries received at birth. In one other case

the cause of death was given as "bowel trouble" and in six other cases it was not clearly defined. In addition to the 45 babies just referred to as having died in their first week, 12 died later either from prematurity or from congenital defects.

Of the deaths from causes arising after birth, 52 were attributed by the attending physicians to diarrhea and enteritis, 50 to respiratory diseases, and 44 to some other or to some ill-defined cause.

TABLE 18.—DISTRIBUTION OF DEATHS DURING FIRST YEAR AND INFANT MORTALITY RATE, ACCORDING TO CAUSE OF DEATH AND NATIVITY OF MOTHER.

CAUSE OF DEATH.	DEATHS DURING FIRST YEAR OF BABIES OF—					
	All mothers.		Native mothers.		Foreign mothers.	
	Number.	Infant mortality rate.	Number.	Infant mortality rate.	Number.	Infant mortality rate.
All causes.....	196	134.0	85	104.3	111	171.3
Diarrhea and enteritis.....	52	35.5	17	20.9	35	54.0
Respiratory diseases.....	50	34.2	19	23.3	31	47.8
Premature births.....	24	16.4	11	13.5	13	20.1
Congenital debility or malformation.....	19	12.9	5	6.1	14	21.6
Injuries at birth.....	7	4.8	6	7.4	1	1.5
Other causes or not reported.....	44	30.1	27	33.1	17	26.2

The latest census report on mortality statistics characterizes diarrhea and enteritis as the "most important preventable cause of infant mortality" in the United States, and numerically at least it proves to be the most important cause of infant death in Johnstown.

Holt¹ says that one of the most striking facts about diarrheal diseases in infants is their prevalence during the summer season. In Johnstown the infant diarrheal deaths were least prevalent in the first quarter of the year, next in the second, next prevalent in the fourth, and most prevalent in the third or summer quarter.

TABLE 19.—DISTRIBUTION OF DEATHS, ACCORDING TO CAUSE OF DEATH AND QUARTER OF CALENDAR YEAR IN WHICH DEATH OCCURRED.

CAUSE OF DEATH.	All deaths.	QUARTER OF CALENDAR YEAR IN WHICH DEATH OCCURRED.			
		First.	Second.	Third.	Fourth.
All causes.....	196	54	29	74	39
Diarrhea and enteritis.....	52	3	5	32	12
Respiratory diseases.....	50	24	8	7	11
Premature births.....	24	7	5	9	3
Congenital debility or malformation.....	19	5	2	8	4
Injuries at birth.....	7	5	1	.....	1
Other causes or not reported.....	44	10	8	18	8

¹ The Diseases of Infancy and Childhood, by L. Emmett Holt. p. 345. New York, 1912.

Our figures are too very full discussion of year.

This excess of infant has been established by such an excess has been the subject of much discussion, but as yet there is no general agreement. Liefmann and Lindemann¹ conclude, however, that in this field of controversy there are certain facts which are at present well established, these being the dependence of the high summer mortality on methods of feeding, on hot weather, and on the living and social condition of the parents. The last factor mentioned by these authors, including as it does housing conditions, economic status, and degree of intelligence, is becoming more and more the subject of study and investigation. It has been shown that the distinctly harmful effect of hot weather on the infant is increased when the housing conditions are bad; in overcrowded homes with bad ventilation the indoor temperature may be many degrees higher than the outdoor temperature. The ignorance and carelessness of mothers has also been shown to increase the bad effect of hot weather. With hygienic care, including cool baths, much fresh air, and careful feeding, many infants are able to pass through extremely hot weather without diarrheal disturbances.

Respiratory diseases were reported as a cause of death with almost as great frequency as diarrheal diseases. As shown by Table 19, these deaths occurred principally in the colder months of the first and fourth quarters of the calendar year.

FEEDING.

Food is recognized as of such importance in relation to infant mortality that studies of this subject frequently resolve themselves into studies of feeding only. Invariably these demonstrate the truth of the statement of Dr. G. F. McCleary² that "in human milk we have a unique and wonderful food for which the ingenuity of man may toil in vain to find a satisfactory substitute." Many mothers, however, still fail to appreciate the risk their young babies face in being given any except the natural infant food, and consequently babies are in large numbers wholly or partly weaned from the breast in the earliest months of their lives.

¹ Liefmann, H., and Lindemann, H., Die Lokalisation der Säuglingsterblichkeit und ihre Beziehungen zur Wohnungsfrage. *Med. Klinik* 1912, pp. 8, 1074.

² *Infantile Mortality and Infants' Milk Depots*. London.

Breast feeding is far more general, comparatively, among the poorer mothers than among the well to do, as shown by the following summary which gives the number and per cent of babies of mothers with husbands earning varying incomes, who had been completely weaned from the breast when they were 3, 6, or 9 months of age, respectively. For each of the periods indicated the percentage completely weaned from the breast is much greater in the groups where earnings are highest.

TABLE 20.—DISTRIBUTION OF BABIES ALIVE AT 3, 6, AND 9 MONTHS OF AGE BY TYPE OF FEEDING AT EACH OF SAID AGES, ACCORDING TO ANNUAL EARNINGS OF FATHER AND NATIVITY OF MOTHER.

ANNUAL EARNINGS OF FATHER AND NATIVITY OF MOTHER.	BABIES LIVING AT AGE OF—								
	3 months.			6 months.			9 months.		
	● Total.	Completely weaned from breast:		Total.	Completely weaned from breast.		Total.	Completely weaned from breast.	
		Num- ber.	Per cent.		Num- ber.	Per cent.		Num- ber.	Per cent.
Total.....	1,355	193	14.2	1,313	250	19.0	1,282	353	27.5
Under \$624.....	341	22	6.5	322	32	9.9	309	57	18.4
\$625 to \$899.....	358	48	13.4	351	63	17.9	342	85	24.9
\$900 and over ¹	629	114	18.1	616	146	23.7	608	201	33.1
Not reported ²	27	9	33.3	24	9	37.5	23	10	43.3
Mother native	765	155	20.3	747	195	26.1	735	251	34.1
Under \$624.....	69	10	14.5	66	13	19.7	65	18	27.7
\$625 to \$899.....	180	36	20.0	177	46	26.0	173	55	31.8
\$900 and over ¹	491	100	20.4	482	127	26.3	476	168	35.3
Not reported ²	25	9	36.0	22	9	40.9	21	10	47.6
Mother foreign.....	500	38	6.4	566	55	9.7	547	102	18.6
Under \$624.....	272	12	4.4	256	19	7.4	244	39	16.0
\$625 to \$899.....	178	12	6.7	174	17	9.8	169	30	17.8
\$900 and over ¹	138	14	10.1	134	19	14.2	132	33	25.0
Not reported ²	2	.....	.....	2	.....	.....	2	.....	.....

¹ Includes those reported as earning "ample." "Ample," as used in this report has a somewhat technical meaning; when information concerning the father's earnings was not available and the family showed no evidences of poverty, the word "ample" was used. When, however, the family was clearly in a state of abject poverty, it was included in the group "Under \$521."

² Unmarried mothers' babies also included.

Breast feeding, wholly or in part, is continued for a longer period by foreign than by native mothers, as indicated in the preceding table, showing that 20.3, 26.1, and 34.1 per cent of the native mothers' babies as compared with 6.4, 9.7, and 18.6 per cent of the foreign mothers' babies had been weaned from the breast at the age of 3, 6, and 9 months, respectively.

Some additional details concerning the type of feeding of babies of native and foreign mothers are given in the next table.

TABLE 21.—NUMBER AND PER CENT OF BABIES AGED 3, 6, AND 9 MONTHS WHO RECEIVED SPECIFIED TYPE OF FEEDING, ACCORDING TO NATIVITY OF MOTHER.

TYPE OF FEEDING AND NATIVITY OF MOTHER.	AGE OF BABY.					
	3 months.		6 months.		9 months.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
All babies.....	1,355	100.0	1,313	100.0	1,283	100.0
Exclusively breast fed.....	987	72.8	616	46.9	230	17.2
Partly breast fed.....	175	12.9	447	34.0	769	59.3
Exclusively artificially fed.....	193	14.2	250	19.0	283	22.5
Native mothers' babies.....	765	100.0	747	100.0	725	100.0
Exclusively breast fed.....	512	66.9	307	41.1	87	11.8
Partly breast fed.....	98	12.8	245	32.8	397	54.6
Exclusively artificially fed.....	155	20.3	195	26.1	251	34.1
Foreign mothers' babies.....	590	100.0	566	100.0	547	100.0
Exclusively breast fed.....	475	80.5	309	54.6	123	22.3
Partly breast fed.....	77	13.1	202	35.7	312	57.0
Exclusively artificially fed.....	38	6.4	55	9.7	112	20.8

The following table shows that artificially fed babies die at a much more rapid rate than breast-fed babies. In the very earliest months exclusive breast feeding seems to be the only safe method. After four months the danger of giving some other food in addition to the breast milk does not seem to be so great.

TABLE 22.—DISTRIBUTION OF BABIES ALIVE AT END OF EACH MONTH, FROM SECOND TO TENTH, INCLUSIVE, ACCORDING TO TYPE OF FEEDING DURING EACH MONTH SPECIFIED, NUMBER OF DEATHS DURING FIRST YEAR, AND RATE PER 1,000 ALIVE IN EACH GROUP.

TYPE OF FEEDING AT TIME SPECIFIED.	LIVE-BORN BABIES.		
	Number alive at specified time.	Deaths during first year.	
		Number.	Rate per 1,000 alive at specified time.
Second month.....	1,389	122	87.8
Breast exclusively.....	1,181	85	72.0
Mixed (i. e., breast and other).....	77	6	77.9
Artificial (i. e., no breast milk).....	131	31	236.6
Third month.....	1,371	104	75.9
Breast exclusively.....	1,112	60	54.0
Mixed.....	98	9	91.8
Artificial.....	161	35	217.4
Fourth month.....	1,355	88	64.9
Breast exclusively.....	987	46	46.6
Mixed.....	175	10	57.1
Artificial.....	193	32	165.8
Fifth month.....	1,337	70	52.4
Breast exclusively.....	871	33	37.9
Mixed.....	253	10	39.5
Artificial.....	213	27	126.8

TABLE 22.—DISTRIBUTION OF BABIES ALIVE AT END OF EACH MONTH, FROM SECOND TO TENTH, INCLUSIVE, ETC.—Continued.

TYPE OF FEEDING AT TIME SPECIFIED.	LIVE BORN BABIES.		
	Number alive at specified time.	Deaths during first year.	
		Number.	Rate per 1,000 alive at specified time.
Sixth month.....	1,318	51	38.7
Breast exclusively.....	780	20	25.6
Mixed.....	310	10	32.3
Artificial.....	228	21	92.1
Seventh month.....	1,313	46	35.0
Breast exclusively.....	616	18	29.2
Mixed.....	447	10	22.4
Artificial.....	250	18	72.0
Eighth month.....	1,305	38	29.1
Breast exclusively.....	502	13	25.9
Mixed.....	541	11	20.3
Artificial.....	262	14	53.4
Ninth month.....	1,291	24	18.6
Breast exclusively.....	395	7	17.7
Mixed.....	611	10	16.4
Artificial.....	285	7	24.6
Tenth month.....	1,282	15	11.7
Breast exclusively.....	220	3	13.6
Mixed.....	709	8	11.3
Artificial.....	353	4	11.3

The next table differentiates between babies of native and foreign mothers, giving the statistics by three-month periods instead of by single months.

TABLE 23.—DISTRIBUTION OF BABIES ALIVE AT THE END OF 3, 6, AND 9 MONTHS, RESPECTIVELY, ACCORDING TO TYPE OF FEEDING, NUMBER OF DEATHS DURING FIRST YEAR, AND RATE PER 1,000 ALIVE IN EACH GROUP, BY NATIVITY OF MOTHER.

AGE OF BABY AND NATIVITY OF MOTHER.	Babies alive at age indi- cated.	BREAST FED EXCLU- SIVELY.			MIXED FOOD: BREAST AND OTHER.			ARTIFICIAL FOOD: NO BREAST MILK.		
		Total.	Deaths in first year.		Total.	Deaths in first year.		Total.	Deaths in first year.	
			Num- ber.	Rate per 1,000 alive at specified age.		Num- ber.	Rate per 1,000 alive at specified age.		Num- ber.	Rate per 1,000 alive at specified age.
ALL										
3 months....	1,355	987	46	46.6	175	10	57.1	193	32	165.8
6 months....	1,313	616	18	29.2	447	10	22.4	250	18	72.0
9 months....	1,282	220	3	13.6	709	8	11.3	353	4	11.3
NATIVE.										
3 months....	766	512	12	23.4	98	2	20.4	155	21	135.5
6 months....	747	307	2	6.5	245	1	4.1	195	14	71.8
9 months....	735	87	1	11.5	397	1	2.5	251	3	12.0
FOREIGN.										
3 months....	590	475	34	71.6	77	8	103.9	38	11	289.5
6 months....	566	309	16	51.8	202	9	44.6	55	4	72.7
9 months....	547	133	2	15.0	312	7	22.4	102	1	9.8

These statistics show that the manner of feeding is one of the most important considerations in the life and health of a baby. But a comparison of the number of deaths among babies whose fathers earn specified sums (Table 31) shows that the influence of poverty reaches even the breast-fed baby. When the fathers' earnings are small a larger proportion of babies die despite breast feeding.

SEX.

The Johnstown investigation comprehended 1,551 births in the year 1911, male births numbering 813 and female 738, the proportion being as 1,101.6 male to 1,000 female births; or, stated inversely, 907.7 female to 1,000 male births. Newsholme¹ says that "male infants always suffer from a higher infant mortality rate than female infants," and in Johnstown we find this true for the group as a whole, the rates being as shown in the next table:

TABLE 24.—DISTRIBUTION OF LIVE BIRTHS AND STILLBIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO SEX OF BABY.

SEX OF BABY.	All births.	Live births.	STILLBIRTHS.		DEATHS IN FIRST YEAR.	
			Total.	Rate per 1,000 births.	Total.	Infant mortality rate.
Total babies.....	1,551	1,463	88	56.7	196	134.0
Male.....	813	761	52	64.0	105	138.0
Female.....	738	702	36	48.8	91	129.6

Among foreign mothers male births were considerably in excess of female births; among native mothers the reverse was true. The more favorable mortality rate for female infants does not prevail among the children of foreign mothers, as can be seen in the next table, which shows an infant mortality rate of 177.5 for girls as compared with one of 166.2 for boys.

¹ Thirty-ninth Annual Report of the Local Government Board. London, 1910.

TABLE 25.—DISTRIBUTION OF ALL BIRTHS, LIVE BIRTHS, AND STILLBIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO SEX OF BABY AND NATIVITY OF MOTHER.

SEX OF BABY AND NATIVITY OF MOTHER.	All births.	Live births.	STILLBIRTHS.		DEATHS DURING FIRST YEAR.	
			Total.	Rate per 1,000 births.	Total.	Infant mortality rate.
BABIES OF NATIVE MOTHERS.						
Total number.....	860	815	45	52.3	85	104.3
Male:						
Number.....	433	406	27	62.4	46	113.3
Per cent.....	50.3	49.8	60.0		54.1	
Female:						
Number.....	427	409	18	42.2	39	95.4
Per cent.....	49.7	50.2	40.0		45.9	
BABIES OF FOREIGN MOTHERS.						
Total number.....	691	648	43	62.2	111	171.3
Male:						
Number.....	380	355	25	65.8	59	166.2
Per cent.....	55.0	54.8	58.1		53.2	
Female:						
Number.....	311	293	18	57.9	52	177.5
Per cent.....	45.0	45.2	41.9		46.8	

MOTHER’S HOUSEHOLD DUTIES, CESSATION AND RESUMPTION OF.

The extent to which the native and foreign mothers in Johnstown relinquished a part of their household duties as the time for their confinement approached is shown below:

TABLE 26.—DISTRIBUTION OF BIRTHS ACCORDING TO TIME OF THE MOTHER’S RELINQUISHMENT OF PART OF HOUSEHOLD DUTIES BEFORE CONFINEMENT, BY NATIVITY OF MOTHER.

TIME OF RELINQUISHMENT OF PART OF HOUSEHOLD DUTIES BEFORE CONFINEMENT.	All births.	To native mothers.	To foreign mothers.
All mothers.....	1,551	860	691
No household duties relinquished to day of confinement.....	1,350	695	655
Part of duties relinquished:			
Less than 7 days before confinement.....	3	1	2
7 to 13 days before confinement.....	7	5	2
2 weeks to 1 month before confinement.....	16	12	4
1 month or more before confinement.....	174	146	28
Had no household duties.....	1	1	

Among the 174 babies of mothers who relinquished part of their household duties a month before confinement, the infant mortality rate was 112.5, as compared with 136.7 for those of other mothers.

TABLE 27.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO TIME OF RELINQUISHMENT OF PART OF HOUSEHOLD DUTIES OF MOTHER BEFORE CONFINEMENT.

TIME OF RELINQUISHMENT OF PART OF HOUSEHOLD DUTIES BEFORE CONFINEMENT.	All births.	Live births.	Deaths during first year.	Infant mortality rate.
All mothers.....	1,551	1,463	196	134.0
No cessation or less than 1 month.....	1,376	1,302	178	136.7
1 month or more.....	174	160	18	112.5
No housework.....	1	1		

The ~~fact that~~ the relinquishment of household duties at a given ~~time~~ ~~may~~ ~~affect~~ the health of the child can not be definitely ~~shown~~. A ~~relation~~ may exist, but on the other hand the difference in the ~~mortality~~ rate may be due to the fact that the mothers could ~~afford to give consideration~~ to their condition and escape some of their ~~heaviest~~ tasks as their pregnancy approached its end, and were members of families who were thoughtful of them and relieved them of these tasks or employed extra household assistance at such times.

Another indication of intelligence and of comfortable surroundings is the care given a mother in the early days of her baby's life, particularly if she is a nursing mother. The duration of her rest period before the resumption of part of her household duties is one measure of this. The foreign mothers, with less education, more numerous and arduous tasks, less opportunity for leisure, and smaller incomes, begin to resume their housework sooner than the native mothers with young babies.

TABLE 28.—DISTRIBUTION OF LIVE BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO TIME OF MOTHER RESUMING PART OF HOUSEHOLD DUTIES AFTER CONFINEMENT, BY NATIVITY OF MOTHER.

TIME OF RESUMING PART OF HOUSEHOLD DUTIES AFTER CONFINEMENT.	LIVE BIRTHS TO—			DEATHS DURING FIRST YEAR.	
	All mothers.	Native mothers.	Foreign mothers.	Total.	Infant mortality rate.
Total.....	1,453	815	648	196	134.0
8 days or less.....	457	44	423	79	159.2
9 to 13 days.....	560	446	114	70	125.0
14 days or more.....	427	318	109	41	96.0
Mother not reported.....	9	7	2	6	(1)

1 Total number of live births less than 5, hence therefore considered too small to use in computing an infant mortality rate.

The fact that a mother takes up her housework in the early days of her baby's life does not necessarily increase the danger of its death. In some cases, however, mothers stated that the quantity of their breast milk was noticeably impaired when they got up and resumed their work too soon. Naturally this would affect the baby's nutrition. In other cases a mother's cares and duties may be so absorbing that she can not give the baby full attention. Whatever the exact explanation, attention should be called to the greater frequency of infant deaths when the mother resumed household duties very soon after childbirth.

A statement of the time of the mother's resumption of household duties in full, like that giving the time of resumption in part, shows that the native mothers have the longer period of rest.

TABLE 29.—DISTRIBUTION OF LIVE BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO TIME OF MOTHER RESUMING ALL HOUSEHOLD DUTIES AFTER CONFINEMENT, BY NATIVITY OF MOTHER.

TIME OF RESUMING ALL HOUSEHOLD DUTIES AFTER CONFINEMENT.	LIVE BIRTHS TO—			DEATHS DURING FIRST YEAR.	
	All mothers.	Native mothers.	Foreign mothers.	Total.	Infant mortality rate.
Total.....	1,463	815	648	196	134.0
8 days or less.....	219	13	206	37	168.9
9 to 13 days.....	182	132	50	30	164.8
14 days or more.....	1,053	663	390	123	116.8
Mother died or not reported	9	7	2	6	(1)

¹ Total live births less than 50; base therefore considered too small to use in computing an infant mortality rate.

The infant mortality rates for all mothers in the group just referred to, according to the time of resuming housework in full after childbirth, show fewer infant deaths proportionately when the mother has had a longer rest; that is, a rest of two weeks or more.

ECONOMIC FACTORS.
EARNINGS OF FATHER.

A grouping of babies according to the income of the father shows the greatest incidence of infant deaths where wages are lowest, and the smallest incidence where they are highest, indicating clearly the relation between low wages and ill health and infant deaths.

For all live babies born in wedlock the infant mortality rate is 130.7. It rises to 255.7 when the father earns less than \$521 a year or less than \$10 a week, and falls to 84 when he earns \$1,200 or more or if his earnings are "ample."¹ The variation in the infant mortality rate from one earnings group to another is not perfectly regular and consistent, but if any two or more consecutive groups are combined an invariable lowering of the infant mortality rate from one such combined group to that next higher results.

¹ "Ample" as used in this report has a somewhat arbitrary meaning. When information concerning the father's earnings was not available and the family showed no evidences of actual poverty, the word "ample" was used. If no information concerning earnings was available when, on the other hand, the family was clearly in a state of abject poverty, then the income was tabulated as "Under \$521."

TABLE 30.—DISTRIBUTION OF LIVE BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO ANNUAL EARNINGS OF FATHER AND NATIVITY OF MOTHER, FOR LEGITIMATE LIVE-BORN BABIES.

ANNUAL EARNINGS OF FATHER ACCORDING TO NATIVITY OF WIFE.	Total live births.	Deaths during first year.	Infant mortality rate.
Total.....	1,431	187	130.7
Under \$625.....	334	83	242.5
Under \$521.....	219	56	255.7
\$521 to \$624.....	165	26	157.6
\$625 to \$899.....	336	47	141.1
\$625 to \$779.....	234	34	147.1
\$780 to \$899.....	141	23	162.9
\$900 or more.....	186	18	96.8
\$900 to \$1,199.....	138	14	101.4
\$1,200 or more.....	48	4	83.3
Ample ¹	476	40	84.9
Husbands with native wives.....	735	76	103.6
Under \$625.....	80	16	200.0
Under \$521.....	32	9	(?)
\$521 to \$624.....	48	7	145.8
\$625 to \$899.....	138	20	144.9
\$625 to \$779.....	80	6	75.0
\$780 to \$899.....	107	14	132.8
\$900 or more.....	129	19	77.5
\$900 to \$1,199.....	92	7	76.1
\$1,200 or more.....	37	3	(?)
Ample ¹	383	30	78.3
Husbands with foreign wives.....	646	111	171.8
Under \$625.....	304	66	217.1
Under \$521.....	187	47	251.3
\$521 to \$624.....	117	19	162.4
\$625 to \$899.....	192	27	140.6
\$625 to \$779.....	138	18	130.4
\$780 to \$899.....	54	9	166.7
\$900 or more.....	57	8	140.6
\$900 to \$1,199.....	46	7	152.2
\$1,200 or more.....	11	1	(?)
Ample ¹	93	10	107.5

¹ See note on page 45.

² Total live births less than 50; base therefore considered too small to use in computing an infant mortality rate.

In considering the babies of native and of foreign mothers separately in the foregoing table, similar variations in mortality rates according to earnings of father are found, although the foreign infant death rate is higher in each group. The foreign are less numerous both actually and relatively in the higher wage groups.

The foreigners of a given wage group almost always live in a poorer neighborhood than the natives earning the same amount. The foreigners go where they find their own countrymen, most of whom are poor, and hence even those who earn a fair wage find themselves,

until they become Americanized, surrounded by poor conditions and an ignorant class of people.

It is of interest to note what per cent of the native and what per cent of the foreign are in the several earnings groups. The next table shows this for all married mothers and not simply for those of live-born babies as in the foregoing table.

TABLE 31.—NUMBER AND PER CENT OF MOTHERS BY NATIVITY, ACCORDING TO THE ANNUAL EARNINGS OF HUSBAND.

ANNUAL EARNING OF HUSBAND.	ALL MOTHERS.		NATIVE MOTHERS.		FOREIGN MOTHERS.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Total.....	1,491	100.0	816	100.0	675	100.0
Under \$521.....	233	15.6	36	4.4	197	29.2
\$521 to \$624.....	174	11.7	50	6.1	124	18.4
\$625 to \$779.....	229	15.4	86	10.5	143	21.2
\$780 to \$899.....	166	11.1	108	13.2	58	8.6
\$900 to \$1,199.....	146	9.8	98	12.0	48	7.1
\$1,200 and over.....	50	3.4	39	4.8	11	1.6
Ample ¹	493	33.1	399	48.9	94	13.9

¹ See note on page 45.

The 1,491 married mothers included in the foregoing table bore 1,517 babies in 1911, the excess being due to plural births. The 33 unmarried mothers and their 34 babies (one mother had twins), although included in some of the general tables, are not included in those relative to the earnings of the husband.

GAINFUL WORK OF MOTHER.

In localities where large numbers of women are engaged in industrial work, comparisons are frequently made of the death rates among their babies with those of the babies of mothers not so engaged. In Johnstown, however, industrial occupations are not open to women, and but 3.1 per cent of the mothers visited went outside their homes to earn money. All mothers who gained money by keeping lodgers or in any other way are, for convenience, designated "wage-earning" mothers, even though their earnings were not in the form of a definite wage at stated periods.

Although not industrially engaged, nearly one-fifth of the mothers did resort to some means of supplementing the earnings of their husbands. Usually they kept lodgers. This was done by the foreign mothers principally, exactly one-third of whom had lodgers, as compared with less than 1 per cent of the native women. Usually work done outside the home consisted either of char work or of assisting husbands in their stores. Generally these stores were in the same building with the home.

When a mother of a young baby does not give her full time to her duties within the home but resorts to means of earning money, it

generally indicates poverty. This is true to a greater degree in Johnstown than in places which have many inducements for women to work. In Johnstown, with its excess of males, especially in the foreign population, the woman's services are particularly needed to make the home.

In the group where the husband earns \$10 a week or less—that is, under \$521 a year—many of the women are wage earners. In each group showing better earnings for the husband the number and percentage of wage-earning wives decline. Such a tabulation as the following almost automatically fixes the minimum wage on which a man, wife, and a child or two can live with any degree of comfort in Johnstown at about \$780 a year. When the husband's wage is less than \$780 a year, it is shown that the wives, in considerable number, must be wage earners. As shown in the next table, in nearly half of the families where the husband earns \$10 a week or less (less than \$521 a year), the wife resorted to some means of earning money; when he earned as much as \$900 a year, only 8.9 per cent of the wives worked, and in the small group where the man earns as much as \$1,200 a year, only 1 in 50.

TABLE 32.—NUMBER AND PER CENT OF HUSBANDS WITH WAGE-EARNING WIVES, BY NATIVITY OF WIFE AND ANNUAL EARNINGS OF HUSBAND.

ANNUAL EARNINGS OF HUSBAND.	TOTAL HUSBANDS.			HUSBANDS HAVING NATIVE WIVES.			HUSBANDS HAVING FOREIGN WIVES.		
	Number.	Husbands with wage-earning wives.		Number.	Husbands with wage-earning wives.		Number.	Husbands with wage-earning wives.	
		Num- ber.	Per cent.		Num- ber.	Per cent.		Num- ber.	Per cent.
Total.....	1,491	278	18.6	816	26	3.2	675	252	37.3
Under \$521.....	233	111	47.6	36	9	25.0	197	102	51.8
\$521 to \$624.....	174	57	32.8	50	3	6.0	124	54	43.5
\$625 to \$779.....	220	51	22.3	86	4	4.7	143	47	32.9
\$780 to \$899.....	166	25	15.1	108	6	5.6	58	19	32.8
\$900 to \$1,199.....	146	13	8.9	98	1	1.0	48	12	25.0
\$1,200 and over.....	50	1	2.0	39	.....	.....	11	1	9.1
"Ample" ¹	493	20	4.1	399	3	.8	94	17	18.1

¹ See note on page 45.

It is impossible to judge from statistics alone whether or not the work done by an individual woman, either her own housework or work for money, is so excessive as to affect her during pregnancy or while nursing to the extent of reacting on the health of the baby; but the fact is that the infant mortality rate is higher among the babies of wage-earning mothers than among others, being 188 as compared with a rate of 117.6 among the babies of nonwage-earning mothers. Wage-earning mothers and low-wage fathers

are in practically the same groups, and it is difficult to secure an exact measurement of the comparative weight of the two factors in the production of a high infant mortality rate.

TABLE 38.—DISTRIBUTION OF LIVE BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE FOR BABIES OF WAGE-EARNING AND NONWAGE-EARNING MOTHERS, ACCORDING TO ANNUAL EARNINGS OF FATHER.

ANNUAL EARNINGS OF FATHER.	MOTHER A WAGE EARNER.		MOTHER NOT A WAGE EARNER.		INFANT MORTALITY RATE.	
	Live births.	Number of deaths in first year.	Live births.	Number of deaths in first year.	Mother a wage earner.	Mother not a wage earner.
Total.....	266	50	1,165	137	188.0	117.6
Under \$521.....	105	26	114	30	247.6	263.2
\$521 to \$624.....	53	8	112	18	150.9	160.7
\$625 to \$779.....	48	6	176	18	127.1	102.3
\$780 or over, or "ample" ¹	60	10	763	71	166.7	93.1

¹ See note on page 45.

ILLEGITIMACY.

Of the 1,551 births included in this investigation 34, or 2.2 per cent, occurred out of wedlock. Nine of the 32 illegitimate babies who were born alive died during their first year. It is recognized that these figures are a very small base from which to draw conclusions concerning the effect of illegitimacy on the infant mortality rate. It is of interest, nevertheless, to note that the findings for this small group are similar to those of countries which compute an infant mortality rate for legitimate and illegitimate children separately, that is, a rate for illegitimates more than twice as high as for children born in wedlock.

TABLE 34.—DISTRIBUTION OF BIRTHS AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE, ACCORDING TO LEGITIMACY.

LEGITIMACY.	Total births.	Live births.	DEATHS DURING FIRST YEAR.	
			Number.	Infant mortality rates.
Illegitimate.....	34	32	9	281.3
Legitimate.....	1,517	1,431	187	130.7

Thirty-two, or 3.7 per cent, of the 860 native mothers, as compared with 2, or 0.3 per cent, of the 691 foreign mothers visited, had illegitimate children in 1911.

REPRODUCTIVE HISTORIES.

In addition to the data relating exclusively to babies born in 1911, a statement was secured from each mother as to the number and duration of each of her pregnancies and the result thereof; that is, the number of children she had borne, alive or dead, the number of miscarriages she had had, and the age at death of each live-born child who had died. Although this information was secured for all mothers, tabulations are presented of the data furnished by married mothers only. Comparatively few single mothers reported more than one child, and information from them on this point is not believed to be as reliable as that from married mothers.

The 1,491 married mothers of babies born in 1911 had had an aggregate of 5,554 pregnancies, resulting in 5,617 births, the excess of 63 births over pregnancies being due to plural births. Eight hundred and four of these children died under 1 year of age, making an infant mortality rate of 149.9 for all their babies, as compared with the rate of 134 for those born in 1911. The stillbirths of these women numbered 194, or 4.5 per cent of the total number of births; miscarriages reported numbered 191, but these were not added to the total reportable ¹ pregnancies.

Details as to the infant mortality rates for all babies born to native and foreign mothers included in this study, not only in the year 1911 but at any other time, are presented in the next table, which classifies the babies according to the total number of reportable pregnancies that their mothers had had, to and including the pregnancy resulting in the 1911 birth.

TABLE 35.—DISTRIBUTION OF MOTHERS, OF LIVE BIRTHS, AND OF DEATHS DURING FIRST YEAR, AND INFANT MORTALITY RATE FOR BABIES OF NATIVE AND FOREIGN MARRIED MOTHERS, ACCORDING TO THE NUMBER OF REPORTABLE PREGNANCIES.

REPORTABLE PREGNANCIES FOR MARRIED MOTHERS.	Number of married mothers.	NUMBER OF BABIES.		INFANT MORTALITY RATE AMONG BABIES OF—		
		Born alive.	Died in first year.	All mothers.	Native mothers.	Foreign mothers.
Total.....	1, 491	5, 363	804	149. 9	113. 1	184. 6
1.....	339	322	35	108. 7	75. 9	183. 7
2.....	283	544	59	108. 5	76. 5	156. 7
3.....	214	626	92	147. 0	118. 0	177. 6
4.....	186	723	78	107. 9	99. 4	116. 3
5.....	147	704	103	146. 3	86. 1	191. 5
6.....	94	546	88	161. 2	157. 4	163. 6
7.....	83	555	78	140. 5	100. 0	173. 8
8.....	54	426	95	223. 0	157. 6	272. 7
9.....	33	283	41	144. 9	128. 4	155. 2
10 or more.....	58	634	135	212. 9	164. 5	257. 6

The statistics, based upon the results of all her reportable pregnancies, show a generally higher infant mortality rate where the mother has had many pregnancies, but there is not always an increase from

¹ "Reportable" pregnancies are those terminating either in the birth of a live child or of a dead child when the period of gestation exceeds 28 weeks; that is, when its registration or report is required by law.

one pregnancy to the next. This is more clearly shown when the pregnancies are grouped as in the next table.

TABLE 36.—INFANT MORTALITY RATE FOR ALL CHILDREN BORNE BY MARRIED MOTHERS, ACCORDING TO SPECIFIED NUMBER OF REPORTABLE PREGNANCIES.

REPORTABLE PREGNANCIES FOR MARRIED MOTHERS.	Infant mortality rate.
Total	149.9
1 and 2.....	108.5
3 and 4.....	126.0
5 and 6.....	152.8
7 and 8.....	176.4
9 or more.....	191.9

This tendency is shown in still another form of summary: Combinations of four or less pregnancies are, for convenience, considered as group 1, while the combinations of over four are designated group 2. The differences in rates in the two groups are notable. The infant mortality rate is much lower for the first than for the second group.

TABLE 37.—INFANT MORTALITY RATE FOR ALL CHILDREN BORNE BY MARRIED MOTHERS, ACCORDING TO SPECIFIED NUMBER OF REPORTABLE PREGNANCIES, BY GROUPS.

REPORTABLE PREGNANCIES FOR MARRIED MOTHERS.	Infant mortality rate.	REPORTABLE PREGNANCIES FOR MARRIED MOTHERS.	Infant mortality rate.
GROUP 1.		GROUP 2.	
2 or less.....	108.5	Over 4.....	171.5
3 or less.....	124.7	Over 5.....	178.8
4 or less.....	119.2	Over 6.....	183.9

This influence of the size of the family upon the infant mortality rate is shown in the computations giving the relative infant mortality rate for the different children borne by married mothers. The rate is most favorable for the second-born child, being 131.2. Among first born it is 143.6; for tenth or later born children 252.3.

TABLE 38.—INFANT MORTALITY RATE FOR ALL CHILDREN BORNE BY MARRIED MOTHERS, ACCORDING TO THE ORDER IN WHICH THE CHILD WAS BORN.

ORDER OF BIRTH.	Infant mortality rate.	ORDER OF BIRTH.	Infant mortality rate.
First-born child.....	143.6	Seventh-born child.....	192.1
Second-born child.....	131.2	Eighth-born child.....	165.4
First and second born children....	138.3	Seventh and eighth born children.	181.5
Third-born child.....	144.2	Ninth-born child.....	128.2
Fourth-born child.....	142.0	Tenth or later born child.....	252.3
Third and fourth born children....	143.2	Ninth and later born children....	201.1
Fifth-born child.....	178.1		
Sixth-born child.....	175.5		
Fifth and sixth born children.....	177.0		

The next table gives a further elaboration of the same data; that is, it shows the infant mortality rate where such rates are lowest and highest, respectively, according to the age of the mother at the child's birth and the order in which the child was born. Attention is again directed to the fact that the statistics presented in this section on "Reproductive histories" are based upon the total number of reportable pregnancies; that is, in addition to the pregnancies resulting in births in 1911, all prior pregnancies of the women considered in the investigation have been included.

TABLE 39.—LOWEST AND HIGHEST INFANT MORTALITY RATES, ACCORDING TO AGE OF MOTHER AT BIRTH OF CHILD AND THE ORDER IN WHICH CHILD WAS BORN.

ORDER OF BIRTH.	INFANT MORTALITY RATES, ACCORDING TO MOTHER'S AGE.			
	Lowest mortality.		Highest mortality.	
	Mother's age.	Mortality rate.	Mother's age.	Mortality rate.
All children.....	20-24	149.0	Under 17	267.2
First child.....	25-29	92.1	17-19	190.4
Second child.....	25-29	100.2	17-19	178.6
Third child.....	30-39	100.4	25-29	160.8
Fourth child.....	30-39	122.4	25-29	155.0
Fifth child.....	30-39	105.2	25-29	236.6
Sixth child.....	30-39	164.8	25-29	171.4

The differences in size of family for native and foreign mothers of different ages are indicated in the next table. The total and average number of live-born children, not reportable pregnancies, are given.

TABLE 40.—TOTAL AND AVERAGE NUMBER OF LIVE-BORN CHILDREN BORNE BY MARRIED MOTHERS HAVING EITHER A LIVE BIRTH OR A STILLBIRTH IN 1911, CLASSIFIED BY NATIVITY AND AGE OF MOTHER.

AGE OF MOTHER AT BIRTH OF CHILD IN 1911.	ALL MARRIED MOTHERS.			NATIVE MARRIED MOTHERS.			FOREIGN MARRIED MOTHERS.		
	Total.	Live-born children.		Total.	Live-born children.		Total.	Live-born children.	
		Number.	Average.		Number.	Average.		Number.	Average.
All ages....	1,465	5,363	3.7	801	2,600	3.2	664	2,763	4.2
Under 20 years..	81	96	1.2	62	70	1.1	19	26	1.4
20 to 24 years....	456	908	2.0	258	483	1.9	198	425	2.1
25 to 29 years....	389	1,261	3.2	196	536	2.7	193	725	3.8
30 to 39 years....	459	2,480	5.4	240	1,188	5.0	219	1,292	5.9
40 years and over.	80	618	7.7	45	323	7.2	35	295	8.4

The next table shows all losses of pregnancy sustained by 628 mothers and the rate of loss per 1,000 births for mothers having different numbers of births or reportable pregnancies. For all mothers it was 188.4. "Loss," as here used, means the sum of infant deaths (or deaths in first year) and stillbirths.

TABLE 41.—AGGREGATE NUMBER OF BIRTHS, LOSSES, AND RATE OF LOSS PER 1,000 BIRTHS, ACCORDING TO NUMBER OF BIRTHS PER MOTHER.

NUMBER OF BIRTHS PER MOTHER.	Aggregate number of births.	Aggregate number of losses.	Rate of loss per 1,000 births.
Total.....	5,617	1,058	188.4
1.....	335	53	158.6
2.....	554	87	157.0
3.....	648	113	174.4
4.....	748	109	145.7
5.....	740	133	179.7
6.....	576	119	206.6
7.....	574	104	181.2
8.....	432	102	236.1
9.....	324	65	200.6
10 or more.....	686	173	252.2

The influence of the economic factor on infant mortality among the babies born prior to 1911 can not be determined with exactness, as no inquiry was made concerning earnings of the father when the other children were born. But it is believed that his earnings during the year following the birth of the 1911 baby can be regarded as an index of the economic standing of the family for some time past. In individual cases, of course, revolutionary changes in the family's income may have occurred, but for the great mass of people in the group considered it is not likely that within such a short space of time as that covered by the child-bearing period of the women considered—most of whom had not had numerous pregnancies—marked changes had taken place. If these known earnings are accepted as an index, the following variations are found to occur in the infant mortality rate for all the babies of whom a record was secured:

TABLE 42.—INFANT MORTALITY RATE FOR ALL CHILDREN OF MARRIED MOTHERS INCLUDED IN THIS INVESTIGATION, DISTRIBUTED ACCORDING TO THE FATHER'S EARNINGS.

FATHER'S ANNUAL EARNINGS.	Infant mortality rate.	FATHER'S ANNUAL EARNINGS.	Infant mortality rate.
Under \$521.....	197.3	\$780 to \$899.....	168.4
\$521 to \$624.....	193.1	\$900 to \$1,199.....	142.3
\$625 to \$779.....	163.1	\$1,200 and over.....	102.2

The infant mortality rate for the babies whose fathers earn under \$521 is almost twice as great as for those born into families in the most prosperous group. These figures strengthen the conclusion reached in the study of the babies born in 1911, namely that the economic factor is of far-reaching importance in determining the baby's chance of life.

GENERAL TABLES.

GENERAL TABLES.

TABLE I.—DISTRIBUTION OF BIRTHS ACCORDING TO NATIONALITY OF MOTHER, BY SECTION OF CITY AND WARD.

50

¹ Includes both legitimate and illegitimate births.

TABLE II.—DISTRIBUTION OF BIRTHS, LIVE BIRTHS, STILLBIRTHS, AND DEATHS IN FIRST YEAR, ACCORDING TO NATIVITY OF MOTHER, BY SEXES OF CITY AND WARD.

SEX	CITY		WARD	
	MALE	FEMALE	MALE	FEMALE
BIRTHS	1,234	1,156	1,234	1,156
LIVE BIRTHS	1,187	1,102	1,187	1,102
STILLBIRTHS	47	54	47	54
DEATHS IN FIRST YEAR	156	142	156	142
MALE	78	78	78	78
FEMALE	78	64	78	64

¹ Includes both married and unmarried mothers.

TABLE III.—DISTRIBUTION OF BIRTHS TO NATIVE AND FOREIGN MARRIED MOTHERS AND NUMBER AND PER CENT OF BIRTHS IN EACH GROUP TO THOSE GAINFULLY EMPLOYED, BY SECTION OF CITY.

SECTION OF CITY.	BIRTHS TO MARRIED MOTHERS.								
	All.			Native.			Foreign.		
	Total.	Gainfully employed.		Total.	Gainfully employed.		Total.	Gainfully employed.	
		Num-ber.	Per cent. ¹		Num-ber.	Per cent. ¹		Num-ber.	Per cent. ¹
All sections.....	1,517	281	18.5	828	26	3.1	689	255	37.0
Down town.....	86	4	4.7	68	2	2.9	18	2	.....
Kernville.....	104	3	2.9	98	3	3.1	6	.....	.....
Hornerstown.....	112	1	.9	101	1	1.0	11	.....	.....
Roxbury.....	85	1	1.2	78	1	1.3	7	.....	.....
Conemaugh Borough.....	143	40	28.0	78	4	5.1	65	36	55.4
Woodvale.....	110	50	45.5	23	2	.....	87	48	55.2
Prospect.....	52	6	11.5	28	2	.....	24	4	.....
Peelerville.....	19	1	.....	17	1	.....	2	.....	.....
Minersville.....	75	23	30.7	17	1	.....	58	22	37.9
Cambria City.....	829	121	36.8	31	1	.....	298	120	40.3
Moxham.....	167	18	10.8	131	2	1.5	36	16	.....
Morrellville.....	197	11	5.6	128	6	4.7	69	5	7.2
Coopersdale.....	38	2	.....	30	.....	.....	8	2	.....

¹ Not shown when base is less than 50.

TABLE V.—DISTRIBUTION OF LIVE BIRTHS AND OF DEATHS DURING FIRST YEAR, ACCORDING TO NUMBER OF PERSONS AND NUMBER OF ROOMS PER FAMILY.



TABLE VII.—DISTRIBUTION OF BIRTHS, LIVE BIRTHS, STILLBIRTHS, AND OF DEATHS DURING FIRST YEAR, ACCORDING TO ATTENDANT AT BABY'S BIRTH AND NATIONALITY OF MOTHER.

ATTENDANT AT BABY'S BIRTH AND NATIONALITY OF MOTHER.	All births.	Live births.	Still-births.	Deaths in first year.
All mothers.....	1,551	1,463	88	196
Physician.....	928	866	62	87
Midwife.....	588	562	26	101
Other.....	14	14	.....	5
None.....	21	21	.....	3
Native mothers.....	860	815	45	85
Physician.....	774	730	44	68
Midwife.....	84	83	1	15
Other.....	2	2	.....	2
Foreign mothers.....	691	648	43	111
Physician.....	154	136	18	19
Midwife.....	504	479	25	86
Other.....	12	12	.....	3
None.....	21	21	.....	3
Slovak, Polish, etc.....	394	367	27	65
Physician.....	45	36	9	10
Midwife.....	340	322	18	54
Other.....	2	2	.....	1
None.....	7	7	.....	.....
Croatian, Servian, etc.....	76	72	4	19
Physician.....	31	28	3	2
Midwife.....	22	21	1	12
Other.....	9	9	.....	2
None.....	14	14	.....	3
Italian.....	75	71	4	13
Physician.....	4	4	.....	1
Midwife.....	71	67	4	12
German.....	53	47	6	6
Physician.....	27	23	4	3
Midwife.....	26	24	2	3
Magyar.....	38	38	.....	4
Physician.....	7	7	.....	1
Midwife.....	31	31	.....	3
British.....	33	31	2	4
Physician.....	29	27	2	2
Midwife.....	3	3	.....	2
Other.....	1	1	.....	.....
Syrian and Greek.....	12	12	.....	.....
Physician.....	3	3	.....	.....
Midwife.....	9	9	.....	.....
Hebrew.....	10	10	.....	.....
Physician.....	8	8	.....	.....
Midwife.....	2	2	.....	.....

TABLE VIII.—DISTRIBUTION OF DEATHS OF INFANTS AT SPECIFIED AGE, ACCORDING TO CAUSE OF DEATH OF INFANT AND NATIVITY OF MOTHER.

TABLE IX.—DISTRIBUTION OF BABIES ALIVE AT BEGINNING OF EACH MONTH FROM FIRST TO NINTH, ACCORDING TO TYPE OF FEEDING DURING EACH MONTH; NUMBER CONTINUING SUCH DIET UNTIL FOLLOWING MONTH; NUMBER CHANGING TO OTHER SPECIFIED TYPE OF FEEDING; NUMBER OF DEATHS IN EACH GROUP IN FIRST YEAR AND ALSO DEATHS AT BEGINNING OF NEXT MONTH.

TYPE OF FEEDING.	ALIVE AT BEGINNING OF SPECIFIED MONTH.			ON SAME DIET AT BEGINNING OF NEXT MONTH.			CHANGED TO MIXED DIET AT BEGINNING OF NEXT MONTH.			CHANGED TO ARTIFICIAL DIET AT BEGINNING OF NEXT MONTH.			CHANGED TO BREAST EXCLUSIVELY AT BEGINNING OF NEXT MONTH.			Dead at beginning of next month.
	Total.	Lived first year.	Died in first year.	Total.	Lived first year.	Died in first year.	Total.	Lived first year.	Died in first year.	Total.	Lived first year.	Died in first year.	Total.	Lived first year.	Died in first year.	
First month.....	1,463	1,267	196	1,267	1,164	103	43	39	4	78	63	15	1	1	.....	74
Breast exclusively.....	1,333	1,193	140	1,190	1,095	85	43	39	4	72	59	13	.....	.....	.....	38
Mixed.....	43	36	7	34	32	2	.....	.....	.....	5	4	1	.....	.....	.....	3
Artificial exclusively.....	55	38	17	53	37	16	.....	.....	.....	1	.....	1	1	1	.....	1
No feeding, infant died at once.....	32	.....	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32
Second month.....	1,389	1,267	122	1,306	1,213	93	24	21	3	40	32	8	1	1	.....	18
Breast exclusively.....	1,181	1,096	85	1,111	1,051	60	23	20	3	32	25	7	.....	.....	.....	15
Mixed.....	77	71	6	74	68	6	1	1	.....	2	2	.....	.....	.....	.....	.....
Artificial exclusively.....	131	100	31	121	94	27	.....	.....	.....	6	5	1	1	1	.....	3
Third month.....	1,371	1,267	104	1,228	1,145	83	83	81	2	43	40	3	1	1	.....	16
Breast exclusively.....	1,112	1,052	60	996	940	46	80	78	2	37	34	3	.....	.....	.....	9
Mixed.....	98	89	9	92	84	8	3	3	.....	2	2	.....	.....	.....	.....	1
Artificial exclusively.....	161	126	35	150	121	29	.....	.....	.....	4	4	.....	1	1	.....	6
Fourth month.....	1,355	1,267	88	1,211	1,148	63	87	84	3	36	32	4	3	3	.....	18
Breast exclusively.....	987	941	46	888	835	33	85	82	3	27	24	3	.....	.....	.....	7
Mixed.....	175	165	10	166	159	7	2	2	.....	1	1	.....	3	3	.....	3
Artificial exclusively.....	193	161	32	177	154	23	.....	.....	.....	8	7	1	.....	.....	.....	8
Fifth month.....	1,337	1,267	70	1,203	1,159	44	83	80	3	32	28	4	.....	.....	.....	19
Breast exclusively.....	871	838	33	780	760	20	68	65	3	15	13	2	.....	.....	.....	8
Mixed.....	253	243	10	227	220	7	15	15	8	8	3
Artificial exclusively.....	213	186	27	196	179	17	9	7	2	8

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TABLE IX.—DISTRIBUTION OF BABIES ALIVE AT BEGINNING OF EACH MONTH FROM FIRST TO NINTH, ACCORDING TO TYPE OF FEEDING DURING EACH MONTH; NUMBER CONTINUING SUCH DIET UNTIL FOLLOWING MONTH; NUMBER CHANGING TO OTHER SPECIFIED TYPE OF FEEDING; NUMBER OF DEATHS IN EACH GROUP IN FIRST YEAR AND ALSO DEATHS AT BEGINNING OF NEXT MONTH—Continued.

TYPE OF FEEDING.	ALIVE AT BEGINNING OF SPECIFIED MONTH.			ON SAME DIET AT BEGINNING OF NEXT MONTH.			CHANGED TO MIXED DIET AT BEGINNING OF NEXT MONTH.			CHANGED TO ARTIFICIAL DIET AT BEGINNING OF NEXT MONTH.			CHANGED TO BREAST EXCLUSIVELY AT BEGINNING OF NEXT MONTH.			Dead at beginning of next month.
	Total.	Lived first year.	Died in first year.	Total.	Lived first year.	Died in first year.	Total.	Lived first year.	Died in first year.	Total.	Lived first year.	Died in first year.	Total.	Lived first year.	Died in first year.	
Sixth month.....	1,318	1,267	51	1,108	1,064	44	160	156	2	45	45	.....	.....	.....	.....	5
Breast exclusively.....	780	760	20	616	598	18	148	147	1	15	15	.....	.....	.....	.....	1
Mixed.....	310	300	10	287	279	8	12	11	1	10	10	.....	.....	.....	.....	1
Artificial exclusively.....	228	207	21	205	187	18	.....	.....	.....	20	20	.....	.....	.....	.....	3
Seventh month.....	1,313	1,267	46	1,166	1,130	36	112	110	2	27	27	.....	.....	.....	.....	3
Breast exclusively.....	616	598	18	502	489	13	98	96	2	13	13	.....	.....	.....	.....	3
Mixed.....	447	437	10	429	420	9	14	14	.....	3	3	.....	.....	.....	.....	1
Artificial exclusively.....	250	232	18	235	221	14	.....	.....	.....	11	11	.....	.....	.....	.....	4
Elighth month.....	1,305	1,267	38	1,141	1,119	22	96	94	1	55	54	1	.....	.....	.....	14
Breast exclusively.....	502	489	13	395	388	7	91	90	1	11	11	.....	.....	.....	.....	5
Mixed.....	541	530	11	516	507	9	4	4	.....	19	19	.....	.....	.....	.....	2
Artificial exclusively.....	262	248	14	230	224	6	.....	.....	.....	26	24	1	.....	.....	.....	7
Ninth month.....	1,291	1,267	24	1,003	989	14	188	186	.....	121	120	1	.....	.....	.....	9
Breast exclusively.....	395	388	7	220	217	3	140	140	.....	32	31	1	.....	.....	.....	3
Mixed.....	611	601	10	551	543	8	18	18	.....	40	40	.....	.....	.....	.....	2
Artificial exclusively.....	285	278	7	232	229	3	.....	.....	.....	49	49	.....	.....	.....	.....	4

TABLE X.—DISTRIBUTION OF BIRTHS TO MARRIED WAGE-EARNING MOTHERS, ACCORDING TO HUSBAND'S ANNUAL EARNINGS AND NATIVITY AND EARNINGS OF MOTHER.

NATIVITY AND ANNUAL EARNINGS OF MARRIED MOTHER.	Total births.	BIRTHS TO MARRIED WAGE-EARNING MOTHER WITH HUSBAND EARNING ANNUALLY—						
		Under \$521.	\$521 to \$624.	\$625 to \$779.	\$780 to \$899.	\$900 to \$1,199.	\$1,200 and over.	Ample. ¹
All wage-earning mothers..	281	112	57	51	25	14	1	21
Under \$53.....	20	6	5	1	4	1	.....	3
\$53 to \$103.....	57	23	12	11	7	3	.....	1
\$104 to \$207.....	89	46	16	19	3	3	.....	2
\$208 to \$311.....	60	23	16	12	4	3	1	1
\$312 and over.....	46	14	8	8	7	2	.....	7
Not reported	9	.....	.....	.....	.....	2	.....	7
Native wage-earning mothers...	26	9	3	4	6	1	.....	3
Under \$53.....	6	2	1	.....	2	1	.....	.....
\$53 to \$103.....	5	2	1	2	.....	.....	.....	.....
\$104 to \$207.....	5	1	1	2	1	.....	.....	.....
\$208 to \$311.....	4	3	.....	.....	1	.....	.....	.....
\$312 and over.....	3	1	.....	.....	2	.....	.....	.....
Not reported	3	.....	.....	.....	.....	.....	.....	3
Foreign wage-earning mothers..	255	103	54	47	19	13	1	18
Under \$53.....	14	4	4	1	2	.....	.....	3
\$53 to \$103.....	52	21	11	9	7	3	.....	1
\$104 to \$207.....	84	45	15	17	2	3	.....	2
\$208 to \$311.....	56	20	16	12	3	3	1	1
\$312 and over.....	43	13	8	8	5	2	.....	7
Not reported	6	.....	.....	.....	.....	2	.....	4

¹ See note on page 45.

TABLE XI.—DISTRIBUTION OF RESULTS OF REPORTABLE PREGNANCIES (LIVE BIRTHS AND STILLBIRTHS) AND MISABORTAGES, ACCORDING TO NUMBER PER MOTHER AND NATIVITY OF MOTHER.

INFANT MORTALITY: JOHNSTOWN, PA.

Foreign	2,837	2,873	36	675	2,763	664	510	303	184.6	110	79	3.8	55	38	5.6
1.....	105	107	2	105	98	96	18	17	183.7	9	9	8.4	1	1	1.0
2.....	220	225	5	110	217	109	34	31	156.7	8	7	3.6	5	3	2.7
3.....	309	312	3	103	304	103	54	44	177.6	8	7	2.6	5	3	2.9
4.....	368	375	7	92	361	92	42	33	116.3	14	8	3.7	9	8	8.7
5.....	410	414	4	82	402	82	77	46	191.5	12	12	2.9	7	4	4.9
6.....	342	346	4	57	330	56	54	38	168.6	16	8	4.6	6	5	8.8
7.....	315	319	4	45	305	45	53	30	173.8	14	11	4.4	2	2	(1)
8.....	248	250	2	31	242	31	66	25	272.7	8	5	3.2	7	4	(1)
9.....	180	181	1	20	174	20	27	13	155.2	7	5	3.9	9	5	(1)
10 or more.....	340	344	4	30	330	30	55	26	267.6	14	7	4.1	4	3	(1)

1 Not shown when base is less than 50.

INFANT MORTALITY: JOHNSTOWN, PA.

	744	752	8	186	723	186	78	64	107.9	29	21	3.9	22	18	9.7
4 reportable pregnancies.....															
20 to 24 years.....	156	160	4	39	148	39	28	21	189.2	12	6	7.5	3	3	(¹)
25 to 29 years.....	300	301	1	75	290	75	26	23	89.7	11	10	3.7	10	6	8.0
30 to 39 years.....	252	255	3	63	249	63	21	17	84.3	6	5	2.4	6	6	9.5
40 years and over.....	36	36	.....	9	36	9	3	3	(²)	.....	.....	.....	3	3	(²)
Average age: 29 years.															
5 reportable pregnancies.....															
20 to 24 years.....	735	740	5	147	704	147	103	67	146.3	36	31	4.9	20	14	9.5
25 to 29 years.....	50	50	.....	10	49	10	9	7	183.7	1	1	2.0	.....	.....	.....
30 to 39 years.....	280	283	3	56	266	56	51	31	191.7	17	15	6.0	6	4	7.1
40 years and over.....	375	377	2	75	361	75	40	27	110.8	16	14	4.2	12	8	10.7
Average age: 30 years.	30	30	.....	6	28	6	3	2	(²)	2	1	(²)	2	2	(²)
6 reportable pregnancies.....															
20 to 24 years.....	564	568	4	94	546	93	88	60	161.2	22	13	3.9	23	14	14.9
25 to 29 years.....	6	6	.....	1	6	1	3	1	(²)	.....	.....	.....	.....	.....	.....
30 to 39 years.....	132	133	1	22	127	21	23	17	181.1	6	1	4.5	6	3	(²)
40 years and over.....	360	362	2	60	347	60	54	36	155.6	15	11	4.1	13	9	15.0
Average age: 33 years.	66	67	1	11	66	11	8	6	121.2	1	1	1.5	4	2	(²)
7 reportable pregnancies.....															
25 to 29 years.....	581	586	5	83	555	83	78	48	140.5	31	22	5.3	27	15	18.1
30 to 39 years.....	98	99	1	14	90	14	23	13	255.6	9	5	10.0	2	1	(²)
40 years and over.....	392	395	3	56	377	56	45	28	119.4	18	15	4.6	19	11	19.6
Average age: 34 years.	91	92	1	13	88	13	10	7	113.6	4	2	4.3	6	3	(²)
8 reportable pregnancies.....															
25 to 29 years.....	432	437	5	54	426	54	95	42	223.0	11	7	2.5	15	9	16.7
30 to 39 years.....	16	16	.....	2	16	2	8	2	(²)	.....	.....	.....	.....	.....	.....
40 years and over.....	408	413	5	51	403	51	87	40	215.9	10	6	2.4	16	9	17.6
Average age: 35 years.	8	8	.....	1	7	1	.....	.....	.....	1	1	(²)	.....	.....	.....
9 reportable pregnancies.....															
30 to 39 years.....	297	299	2	33	283	33	41	20	144.9	16	11	5.4	13	8	24.2
40 years and over.....	207	208	1	23	195	23	32	15	164.1	13	8	6.3	5	4	(²)
Average age: 37 years.	90	91	1	10	88	10	9	5	102.3	3	3	3.3	8	4	(²)
10 or more reportable pregnancies.....															
30 to 39 years.....	654	666	12	58	634	58	135	45	212.9	32	17	4.8	14	10	17.2
40 years and over.....	360	364	4	33	342	33	85	26	248.5	22	11	6.0	7	6	(²)
Average age: 39 years.	294	302	8	25	292	25	50	19	171.2	10	6	3.3	7	4	(²)

¹ Excess of births over pregnancies due to plural births.
² Rate not computed because of small base.

* Includes 21 having 10 pregnancies; 16 having 11; 11 having 12; 6 having 13; 3 having 14; 1 having 16.

3 reportable pregnancies...										642	650	8	214	626	214	92	147.0	75	24	23	3.7	26	18	8.4
Husband earns:																								
Under \$521.....										114	115	1	38	110	38	27	245.5	23	5	4	4.3	5	3	.....
\$521 to \$624.....										102	104	2	34	101	34	16	158.4	13	3	3	1.9	1	1	.....
\$625 to \$779.....										84	84	.....	28	82	28	13	158.5	11	2	2	2.4	3	2	.....
\$780 to \$899.....										87	87	.....	29	83	29	6	72.3	6	4	4	4.6	5	4	.....
\$900 to \$1,199.....										57	58	1	19	55	19	11	200.0	8	3	3	5.2	7	3	.....
\$1,200 and over.....										6	7	1	2	7	2	1	.....	1	.....	.....	.....	.....	.....	.....
Ample ¹										192	195	3	64	188	64	18	95.7	13	7	7	3.6	5	5	7.8
4 reportable pregnancies...										744	752	8	186	723	186	78	107.9	64	29	21	3.9	22	18	9.7
Husband earns:																								
Under \$521.....										104	104	.....	26	101	26	13	128.7	9	3	2	1.9	4	2	.....
\$521 to \$624.....										88	89	1	22	86	22	10	116.3	9	3	1	3.4	2	2	.....
\$625 to \$779.....										136	137	1	34	129	34	19	147.3	15	8	6	5.8	3	2	.....
\$780 to \$899.....										96	97	1	24	95	24	13	136.8	12	2	1	2.1	3	3	.....
\$900 to \$1,199.....										56	58	2	14	55	14	4	72.7	2	3	1	5.2	2	2	.....
\$1,200 and over.....										40	41	1	10	39	10	5	.....	4	2	2	.....	2	2	.....
Ample ¹										224	226	2	56	218	56	14	64.2	13	8	8	3.5	6	5	8.9
5 reportable pregnancies...										735	740	5	147	704	147	103	146.3	67	36	31	4.9	20	14	9.5
Husband earns:																								
Under \$521.....										130	131	1	26	125	26	21	168.0	12	6	6	4.6	3	3	.....
\$521 to \$624.....										90	91	1	18	85	18	20	235.3	12	6	5	6.6	3	1	.....
\$625 to \$779.....										100	100	.....	20	99	20	18	181.8	13	1	1	1.0	3	2	.....
\$780 to \$899.....										110	110	.....	22	106	22	13	122.6	8	4	4	3.6	3	2	.....
\$900 to \$1,199.....										65	66	1	13	60	13	6	100.0	5	6	4	10.0	.....	.....	.....
\$1,200 and over.....										30	30	.....	6	26	6	10	.....	6	4	3	.....	2	1	.....
Ample ¹										210	212	2	42	203	42	15	73.9	11	9	8	4.2	6	5	.....
6 reportable pregnancies...										564	568	4	94	546	93	88	161.2	60	22	13	3.9	23	14	14.9
Husband earns:																								
Under \$521.....										132	132	.....	22	124	21	26	209.7	14	8	3	6.1	2	2	.....
\$521 to \$624.....										60	60	.....	10	59	10	9	152.5	8	1	1	1.7	6	2	.....
\$625 to \$779.....										114	115	1	19	110	19	14	127.3	11	5	2	4.3	3	2	.....
\$780 to \$899.....										48	48	.....	8	48	8	7	.....	6	.....	.....	.....	4	2	.....
\$900 to \$1,199.....										72	74	2	12	70	12	12	171.4	9	4	3	5.4	4	3	.....
\$1,200 and over.....										12	12	.....	2	11	2	3	.....	1	1	1	.....	.....	.....	.....
Ample ¹										126	127	1	21	124	21	17	137.1	11	3	3	2.4	4	3	.....

¹ See note on page 45.

¹ Not shown when base is less than 50.

INFANT MORTALITY : JOHNSTOWN, PA.

10 or more reportable pregnancies.....	654	666	12	58	634	58	135	212.9	45	32	17	4.8	14	10	17.2
Husband earns:															
Under \$521.....	56	58	2	5	52	5	10	192.3	4	6	1	10.3	1	1	.....
\$521 to \$624.....	32	33	1	3	32	3	17	.....	3	1	1	.....	1	1	.....
\$625 to \$779.....	70	71	1	6	70	6	16	228.6	4	1	1	1.4	2	1	.....
\$780 to \$899.....	78	80	2	7	76	7	26	342.1	7	4	2	5.0	3	2	.....
\$900 to \$1,199.....	114	114	.....	10	110	10	24	218.2	8	4	3	3.5	2	2	.....
\$1,200 and over.....	24	24	.....	2	22	2	5	.....	1	2	1	8.3	.....	.....	.....
Ample ¹	280	286	6	25	272	25	37	136.0	18	14	8	4.9	5	3	.....

¹ Not shown when base is less than 50.

² See note on page 45.

TABLE XIV.—DISTRIBUTION ACCORDING TO NUMBER OF PREGNANCIES AND AGE GROUPS OF MARRIED MOTHERS CLASSIFIED BY NATIVITY.

MOTHER'S AGE AND NUMBER OF REPORT- ABLE PREGNANCIES.	ALL MOTHERS.		NATIVE MOTHERS.		FOREIGN MOTHERS.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Total pregnancies.....	1,491	100.0	816	100.0	675	100.0
1.....	339	22.7	234	28.7	105	15.6
2.....	283	19.0	173	21.2	110	16.3
3.....	214	14.4	111	13.6	103	15.3
4.....	186	12.5	94	11.5	92	13.6
5.....	147	9.8	65	8.0	82	12.1
6.....	94	6.3	37	4.5	57	8.4
7.....	83	5.6	38	4.7	45	6.7
8.....	54	3.6	23	2.8	31	4.6
9.....	33	2.2	13	1.6	20	3.0
10 and over.....	58	3.9	28	3.4	30	4.4
Under 20 years, total pregnancies....	89	100.0	66	100.0	23	100.0
1.....	74	83.1	55	83.3	19	82.6
2.....	12	13.5	10	15.2	2	8.7
3.....	3	3.4	1	1.5	2	8.7
20 to 24 years, total pregnancies.....	461	100.0	261	100.0	200	100.0
1.....	178	38.6	114	43.7	64	32.0
2.....	156	33.8	86	33.0	70	35.0
3.....	77	16.7	42	16.1	35	17.5
4.....	39	8.5	14	5.4	25	12.5
5.....	10	2.2	4	1.5	6	3.0
6.....	1	.2	1	0.4		
25 to 29 years, total pregnancies.....	395	100.0	199	100.0	196	100.0
1.....	57	14.5	45	22.6	12	6.1
2.....	74	18.7	46	23.1	28	14.3
3.....	95	24.1	40	20.1	55	28.1
4.....	75	19.0	40	20.1	35	17.9
5.....	56	14.2	17	8.5	39	19.9
6.....	22	5.6	7	3.6	15	7.7
7.....	14	3.5	4	2.0	10	5.1
8.....	2	.4			2	1.0
30 to 39 years, total pregnancies.....	466	100.0	245	100.0	221	100.0
1.....	30	6.4	20	8.2	10	4.5
2.....	39	8.4	29	11.8	10	4.5
3.....	36	7.7	25	10.2	11	5.0
4.....	63	13.5	33	13.5	30	13.6
5.....	75	16.1	40	16.3	35	15.8
6.....	60	12.9	24	9.8	36	16.3
7.....	56	12.0	28	11.4	28	12.7
8.....	51	10.9	23	9.4	28	12.7
9.....	23	4.9	8	3.3	15	6.8
10 and over.....	33	7.1	15	6.1	18	8.1
40 years and over, total pregnancies.	80	100.0	45	100.0	35	100.0
2.....	2	2.5	2	4.4		
3.....	3	3.8	3	6.7		
4.....	9	11.3	7	15.6	2	5.7
5.....	6	7.5	4	8.9	2	5.7
6.....	11	13.8	5	11.1	6	17.1
7.....	13	16.3	6	13.3	7	20.0
8.....	1	1.3			1	2.9
9.....	10	12.5	5	11.1	5	14.3
10 and over.....	25	31.3	13	28.9	12	34.3

TABLE XV.—DISTRIBUTION OF MARRIED MOTHERS BY LOSSES SUSTAINED, ACCORD-
ING TO NATIVITY OF MOTHER AND NUMBER OF POSSIBLE LOSSES.

NUMBER OF BIRTHS OR POS- SIBLE LOSSES AND NA- TIVITY OF MOTHER.	Number of mothers.	DISTRIBUTION OF MOTHERS ACCORDING TO NUMBER OF LOSSES.							
		1 loss.	2 losses.	3 losses.	4 losses.	5 losses.	6 losses.	8 losses.	10 or more losses.
All mothers.....	1,491	399	121	60	24	13	8	1	2
1 birth.....	335	53	.....	.....	.....	.....	.....	.....	.....
2 births.....	277	67	10	.....	.....	.....	.....	.....	.....
3 births.....	216	73	14	4	.....	.....	.....	.....	.....
4 births.....	187	55	13	8	1	.....	.....	.....	.....
5 births.....	148	48	19	11	1	2	.....	.....	.....
6 births.....	96	44	13	8	2	1	2	.....	.....
7 births.....	82	22	19	10	2	.....	1	.....	.....
8 births.....	54	18	8	10	4	2	2	.....	.....
9 births.....	36	9	10	5	1	1	2	.....	.....
10 or more births.....	60	10	15	4	13	7	1	1	2
Native mothers.....	816	199	59	19	5	6	1	1	.....
1 birth.....	232	29	.....	.....	.....	.....	.....	.....	.....
2 births.....	170	36	5	.....	.....	.....	.....	.....	.....
3 births.....	111	35	7	1	.....	.....	.....	.....	.....
4 births.....	98	33	6	3	.....	.....	.....	.....	.....
5 births.....	65	19	10	4	.....	.....	.....	.....	.....
6 births.....	38	19	7	1	.....	1	.....	.....	.....
7 births.....	37	10	8	3	.....	.....	1	.....	.....
8 births.....	21	8	5	3	.....	.....	.....	.....	.....
9 births.....	15	4	4	3	1	.....	.....	.....	.....
10 or more births.....	29	6	7	1	4	5	.....	1	.....
Foreign mothers.....	675	200	62	41	19	7	7	.....	2
1 birth.....	103	24	.....	.....	.....	.....	.....	.....	.....
2 births.....	107	31	5	.....	.....	.....	.....	.....	.....
3 births.....	105	38	7	3	.....	.....	.....	.....	.....
4 births.....	89	22	7	5	1	.....	.....	.....	.....
5 births.....	83	29	9	7	1	2	.....	.....	.....
6 births.....	58	25	6	7	2	.....	2	.....	.....
7 births.....	45	12	11	7	2	.....	.....	.....	.....
8 births.....	33	10	3	7	4	2	2	.....	.....
9 births.....	21	5	6	2	.....	1	2	.....	.....
10 or more births.....	31	4	8	3	9	2	1	.....	2

APPENDIXES.



APPENDIX I.

STATEMENTS OF MOTHERS.

The statements appended herewith are taken from the testimony of the mothers whose babies were included in the investigation. They, like photographs of random spots, illustrate instances where hard work and a limited income are coexistent with marked loss of infant life. They are offered not as medical or scientific testimony, but because of the natural interest in the mother's viewpoint on these intimate matters. A closer contact with a few individual cases can not but serve to humanize and make more realistic a mass of figures on similar and related topics.

Mother aged 34 years; 9 pregnancies in 17 years; 7 live born; 2 stillborn; no miscarriages reported; 3 deaths in first year, viz, aged 9 weeks, strangled on milk; aged 1 year, pneumonia; aged 6 months, pneumonia; 3 children living at time of agent's visit. In poor health. Has had sunstroke. Worries. Torn at birth of one child. Has lacked medical attention. Father has miner's consumption.

Mother aged 36 years; 10 pregnancies in 12 years; 6 live born; 1 stillborn; 3 miscarriages reported; one death in first year, viz, 4 hours, hemorrhage; 5 children living at time of agent's visit. Formerly toll keeper and had to lift heavy gate during earlier pregnancies. Housework since marriage excessive. Always has instrument deliveries. Home fair. Father skilled mill hand.

Mother aged 38 years; 12 pregnancies in 17 years; 11 live born; 1 miscarriage reported; 3 deaths the first year, viz, 3 weeks, prematurity; 3 months, pneumonia; 3 weeks, unknown; 7 children living at time of agent's visit. During pregnancy resulting in premature birth, in a state of worry and excitement owing to frequent fights in neighborhood. During pregnancy resulting in miscarriage she overexerted self doing heavy laundry work, lifting boilers, etc. Home fair.

Mother aged 35 years; 11 pregnancies in 15 years; 8 live born; 3 miscarriages reported; 3 deaths in first year, viz, aged 10 days, yellow jaundice; 10 days, cause unknown; 6 months, spinal meningitis; 4 children alive at time of agent's visit. Had to do excessive work during pregnancies, as sweeping, washing, lifting tubs, carrying water, etc.

Mother aged 25 years; 7 pregnancies in 6 years; 3 live born; 4 stillborn; 2 deaths the first year, viz, aged 11 days, cause unknown; aged 2 days, cause unknown; 1 child alive at time of agent's visit. Physician stated mother was overworked during pregnancies, therefore during pregnancy resulting in birth of healthy baby in 1911 she was extra careful of self. Fair home. Father skilled mill worker.

Mother aged 34 years; 4 pregnancies in 5 years; all live born; 1 death the first year, viz, aged 11 months, spinal meningitis; 3 children alive at time of agent's visit. Doctor stated period of gestation only 8½ months for each pregnancy. Always miserable during pregnancies. Can not eat. Feet and legs swell. Children fed and cared for intelligently. Home good.

Mother aged 41 years; 12 pregnancies in 22 years; 12 live born; 1 death the first year, viz, aged 3 weeks, spasms; 11 children alive at time of agent's visit. Baby of 1911 poorly developed and in poor health at 1 year of age. When 6 months old was given soup, milk, coffee, and crackers; at 9 months, sauerkraut, cabbage, pie, and everything. Dirty house. Father machinist in mill.

Mother aged 37 years; 12 pregnancies in 15 years; 8 live born; 4 miscarriages reported; 1 death the first year, viz, aged 1 month, cause unknown; 6 children alive

at time of agent's visit. Hard worked and worried during pregnancies. Laundry and char work in addition to home duties, but manages to give babies only breast milk during first year.

Mother aged 31 years; 10 pregnancies in 10 years; 8 live born; 2 stillborn; 4 deaths the first year, viz, aged 7 days, 2 days, 1 day, 12 hours, cause unknown; 4 children alive at time of agent's visit. Doctor says not strong enough to bear babies to term or to have healthy children.

Mother aged 32 years; 7 pregnancies in 11 years; 5 live born; 2 stillborn; one death the first year, viz, aged 2 months, mother says from nervous shock and fright from passing trains. Baby died a day or so after family moved to house along railroad track; 3 children alive at time of agent's visit.

Mother aged 27 years; 6 pregnancies in 10 years; 6 live born; 3 deaths the first year, viz, all aged few weeks, cause unknown; 3 children alive at time of agent's visit. Babies who died all born before marriage, when mother was a servant and had to leave them to be artificially fed and poorly cared for when she went to work.

Mother aged 30 years; 9 pregnancies in 14 years; 6 live born; 3 stillborn; no deaths the first year; 3 children alive at time of agent's visit. During one pregnancy resulting in stillbirth felt strain of struggle she made to separate fighting lodgers; during another resulting in stillbirth she had fall on ice; and during the third her work had been excessive.

Mother aged 41 years; 13 pregnancies in 22 years; 13 live born; 7 deaths the first year, viz, aged 1 year, 1 year, 2 days, 1 month, few minutes, 6 weeks, 8 weeks, causes unknown; 4 children alive at time of agent's visit. No member of family has ever attended school. They own a lot in a miserable unpaved alley, on which they have built houses 3 deep. They have a dirty cow shed there and sell milk in open receptacles. No sewer connection; yard privy; but they have city water. Save father's earnings and live on milk sales. Never has a doctor or midwife at child birth—manages alone. Began to do her housework two days after birth of 1911 baby.

Mother aged 26 years; 6 pregnancies in 5 years; 5 live born; 1 stillborn; 3 deaths in first year, viz, aged 15 minutes, one-half day, 3 days; 1 child alive at time of agent's visit. The 1911 baby alive and in poor health at 1 year of age. Was given table food in addition to breast milk from 4 months of age.

Mother aged 31 years; 6 pregnancies in 9 years; 6 live born; 2 deaths the first year, viz, aged a few months, croup; a few months, bronchitis and pneumonia; two others at 14 months, each of bronchitis and pneumonia; 2 children alive at time of agent's visit. Father has tuberculosis. Poor, insanitary home. Total income, \$500 a year.

Mother aged 33 years; 4 pregnancies in 8 years; 3 live born; 1 miscarriage reported; 1 death the first year, viz, aged 4 months, pneumonia; 2 children alive at time of agent's visit. Does excessive work in own home in addition to char work. The 1911 baby was only one to die in first year. Deserted by husband early in that pregnancy. This pregnancy period was one of worry and mental and physical strain to support her family, and when baby was born she had no milk and gave him condensed milk from birth.

Mother aged 30 years; 11 pregnancies in 12 years; all live born; 5 deaths the first year, of which 2 were from pneumonia; 6 children alive at time of agent's visit. Frail, hard worked, and worried over money matters. Kitchen is living room and a "dark hole in basement." Ventilation of home bad; sleeping-room window always shut "tight." Baby born in 1911 died of pneumonia at age of 9 months.

Mother aged 34 years; 6 pregnancies in 10 years; 6 live born; 5 deaths in first year; causes thereof unknown. The 1911 baby was aged 2 months at death; 1 child alive at time of agent's visit. Says she has never had enough to eat since marriage and that breast milk always leaves her two weeks after childbirth. Poor, dirty, close house. Father a teamster who spends considerable portion of wages in drink.

Mother aged 20 years; 1 pregnancy, resulting in a live-born child who died at the age of 9 months of cholera infantum. Her only child born over one year after husband's desertion; latter claims she is syphilitic. She comes from feeble-minded family whose history is matter of State record. Her grandfather acquitted of killing his son on account of mental condition. Her mother and sister and latter's 18-months-old baby all officially pronounced feeble-minded. Family of loose morals. The baby born in 1911 weaned from breast at age of 4 months and died of cholera infantum at age of 9 months.

Mother aged 30 years; 9 pregnancies in 11 years; 8 live births; 1 miscarriage reported; 3 deaths in first year, viz, aged 3 months, pneumonia; aged 8 months, malarial fever and rheumatism; and the baby born in 1911 weaned from breast when 6 weeks of age, died at age of 9½ months of gastroenteritis; 5 children alive at time of agent's visit. During pregnancy resulting in miscarriage two months after conception, lived on second floor and had to carry heavy wash up and down from yard.

Mother aged 27 years; 3 pregnancies in 3 years, all live births; 2 died in first year, viz, aged 15 days of cause unknown to mother, and other born in 1911, of hereditary syphilis, according to death certificate. Poor, dirty home. Father a steel-mill laborer at \$10 a week. One child alive at time of agent's visit.

Mother aged 35 years; 6 births in 12 years; 4 live births and 2 stillbirths. All live born died in first year, viz, aged 6 weeks, bronchitis; aged 13 days, bronchitis; aged 2 days, weak from birth; aged 4 hours, inanition, the last being the 1911 baby. Had another child the following year and she and her husband were so anxious that at least one child should live that she consulted physician concerning its care. Upon his advice she gave up her 20 boarders immediately after child's birth and devoted all her time to it. Thinks she did not stop her hard work soon enough; says she has always worked too hard, keeping boarders in this country and cutting wood and carrying it and water on her back in the old country. Also says the carrying of water, coal, and cases of beer in this country is great strain on her. Father furious because all babies die; wore red necktie to funeral of last to show his disrespect for wife who can only produce children that die. A type of woman who would follow, and profit by, instruction in prenatal care.

Mother aged 25 years; 3 pregnancies in 3 years; all live births; 2 died in first year, viz, aged 1 day, cause unknown; aged 11 months (born in 1911), pneumonia; 1 child alive at time of agent's visit. Father a steel-mill hand. Damp, badly ventilated home, outside toilet.

Mother aged 27 years; 8 children; 1 before marriage and 7 in the 11-year period since marriage at the age of 16. All live births; 3 deaths under 1 year of age, viz, aged 8 months, unknown cause, "stomach turned black"; 3-months old, same statement as for 8-months old child; aged 11 months, ileocolitis. This last born in 1911, was breast fed only three months and then given condensed milk to supplement breast-milk feeding. Four children alive at time of agent's visit. Boarders. Fairly good home. Father a steel-mill hand.

Mother aged 25 years; 2 pregnancies in 8 years; both live-born children, of whom one died, aged 2 days, cause unknown. Mother says neither doctor nor midwife present at birth; that husband "caught" baby at 3 a. m., and she was up and doing regular work at 6 a. m. One child alive at time of agent's visit. Thirteen boarders. Family sleeps in kitchen, which is also used as dining and living room for boarders. Water supply in yard, and privy in yard used by several families. Father works in coal mine.

Mother aged 34 years; 8 pregnancies in 16 years; all live-born children, all but 2 of whom died in first 2 weeks of life from unknown causes, except the last, whose death was certified as from ileocolitis; 2 children alive at time of agent's visit. Never has doctor or midwife at childbirth. Very ignorant. Father a laborer in steel mill.

Mother aged 28 years; 3 pregnancies in 3 years, resulting in 4 live births; 2 (twins) died in their first year, aged 1 month and 4 months, of inanition and malnutrition, respectively; they were never breast fed; condensed milk from birth; 2 children alive at time of agent's visit. Six boarders. Poor, dirty home. City water in yard, also dry privy. Father a steel-mill hand.

Mother aged 36 years; 12 pregnancies in 17 years; all live births; 3 died first year, viz, aged 9 days, born sickly with big head; 9 months, bowel trouble; 10 months, bowel trouble; 9 children alive at time of agent's visit. Began to feed the 1911 baby, who died last, on raw cows' milk from the age of 2 months because she went out to do laundry work and cleaning in the home of a physician and the baby had to be fed in her absence. Bought milk from neighboring cow shed. Combined housework for her large family and outside work a great strain on mother. Dirty home. Father works in mine.

Mother aged 31 years; 10 births in 14 years, 1 being stillbirth. Every live-born child of this woman died in 1 year or less, as follows: Age 4 months, cough; 3 months, cough; 1 year, unknown; 1 year, unknown (the last two were insured for \$26 each;

one baby died before company delivered policy); the others died at ages of 3 months, 4 months, 1 year, 3 months, and 10 weeks, respectively, of causes unknown to mother, who said all had "sores on body." Certificate gives scrofula as cause of death of baby born in 1911. The first 2 children were born and died in Europe. Attending midwife in Johnstown says father has syphilis. Both parents, however, claim to be healthy; father drinks, came to United States 2 years ahead of wife. Had worked in cigar factory from age of 13 until she came to United States. Her own mother had worked in same place 30 years. She never stays in bed over 3 days when a child is born. Father a car-shop rigger.

Mother aged 25 years; only 1 pregnancy; mother married 2 years. Baby born alive with "sores on body"; died aged 4 months; she says "wasted away"; certificate states ileocolitis. Weaned from breast when 3 weeks old because she had typhoid. Hard worker, but has dirty home and never opens a window. Water and privy in yard. Father a steel-mill hand.

Mother aged 20 years. First and only pregnancy resulted in live-born child who died, aged 6 months, of convulsions. Weaned from breast, aged 4 months, because her milk left her on account of hard work. Baby on condensed milk till 5 months old, then given bread, cakes, apples, etc. Five boarders. Home neither clean nor well ventilated. Father a steel-mill worker.

Mother aged 22 years; only 1 pregnancy; a live-born child that died in July, aged 7 months, of cholera infantum. Milk and crackers added to breast feeding at age of 5 months. Again pregnant when baby was 6 months old, but continued nursing baby until its death, 1 month later. Unclean 1-room home; yard hydrant and privy for use of this and other families. Father works in coal mine.

Mother aged 38; 13 pregnancies in 17 years, 11 live births and 2 premature stillbirths. Only 2 children living at time of agent's visit. The second to eighth, the eleventh, and the thirteenth children died of bowel trouble at ages ranging from 3 weeks to 4 months. Only cause of death she can give is that "food did not agree with them." Believed in feeding babies and gave them everything anybody told her to give them; begins at 1 month to give them bread, potatoes, egg, crackers, etc. For last baby that died she got a goat and gave the baby its milk; goat got sick, but she persisted in giving the baby its milk until the goat went dry. Directed the feeding of her daughter's baby until its death at 3 months of age. On account of many children she has had, the neighbors consider her an authority on baby care. Slovenly home. Dry privy in yard. Father a stable hand.

MOTHERS WHO HAD STILLBORN CHILDREN IN 1911.

Mother aged 23 years; 2 live births and 1 stillbirth in 4 years. Stillbirth followed a fall down cellar steps while carrying coal when 6 months pregnant; 2 children alive at time of agent's visit. Father works in coal mine.

Mother aged 24 years; 3 pregnancies in 5 years, 2 live births and 1 stillbirth, which physician said was due to excessive work on sewing machine during pregnancy. Both live-born children alive at time of agent's visit. Father a steel-mill hand. Good home.

Mother aged 30 years; no live births; 2 miscarriages and 1 stillbirth from August, 1910, to November, 1911; periods of gestation 5, 4, and 6 months, respectively. Cause of losses unknown. When 21 years old had operation for prolapsus. Always tired and weak during pregnancies. Father a steel-mill worker. Home good.

Mother aged 39 years; 9 pregnancies in 19 years; 5 live births; 2 stillbirths; 2 miscarriages reported. Gives overwork and worry as cause of miscarriages and 1 stillbirth and a fall as cause in the other stillbirth; 4 children alive at time of agent's visit. Father laborer in steel mill. Home good.

Mother aged 27 years; 3 pregnancies in 8 years; 2 live births (in 1903 and 1905) and 1 stillbirth (in 1911); 2 children alive at time of agent's visit. In 1908 had fall which caused internal displacements; never had treatment for same; during 1911 pregnancy had convulsions from uremic poisoning. She has kidney trouble. Fair living conditions. Father a mill hand.

Mother aged 30 years; 2 pregnancies in 2 years; no live births. First a miscarriage after 4½ months' gestation, said to be due to fall; second, after 7 months' gestation, attributed to indigestion. Father a machinist in steel mill. Home clean. Dry privy and well are in yard.

Mother aged 37 years; 10 pregnancies in 16 years; first, seventh, eighth, and ninth children were live born; the others stillborn. All the live born died, as follows: Age 3 months, scarlet fever; 2 months, scarlet fever; 6 months, "boils on stomach"; 6 weeks, cause unknown. Has no idea of causes of stillbirths; very ignorant. Keeps boarders. Father a laborer in steel mill.

Mother aged 31 years; 5 pregnancies in 8 years; 4 live born; 1 (the last) premature stillborn from an unknown cause. All the live-born children died under 6 months of age, viz, 6 months old, summer complaint; 2 months, summer complaint; 2 weeks, unknown cause, but was half black and had sores on stomach; 1 day old, cause unknown. Keeps boarders. Home bad. Father a laborer in steel mill.

Mother aged 28 years; 5 pregnancies in 3 years; 4 live births, the last a stillbirth; all live born died of unknown causes at ages of 10 months, 3 weeks, 2 weeks, and 2 weeks, respectively. First baby bottle fed from birth; could not nurse him on account of having "neck full of boils." Has had hospital treatment for womb trouble. Father a steel-mill worker. Insanitary home.

Mother aged 23 years; 4 pregnancies in 3 years; 1 live birth and 3 stillbirths. The live-born baby, who died at age of 3 months of unknown cause, had "scabs on face." She is a charwoman, who thinks that "possibly" she works too hard. While pregnant always has fear babies will be born dead. Does not feel good after big day's work done during pregnancy. Father a steel-mill hand. Poor home conditions.

APPENDIX II.

DETAILED DESCRIPTION OF METHOD USED FOR COMPUTING INFANT MORTALITY RATE FOR THIS REPORT, AND COMPARISON WITH CONVENTIONAL METHOD.

In this study the infant mortality rate is obtained by comparing the number of babies born alive in Johnstown in 1911 with the number of those same babies who died before they were a year old, omitting, as was necessary in a detailed study where approximations were not allowed, those babies whose parents could not be located by the bureau's agents. This method gives an exact and absolute infant mortality rate of 134 per thousand for this limited group of babies.

Obviously, this method can not practically be used to obtain the infant mortality rate for large groups of population, year by year. Where there is a constant flow of population, cities, States, or communities can not trace the place of birth of infants dying within their respective areas or follow each child born within their boundaries if it moves away. It is impossible to know the life history of each child born in the area considered in a given year and to determine, as has been done for this intensive study of a small and definite group, how many babies per 1,000 live born in a given area actually do die under 1 year of age.

The established method of obtaining an infant mortality rate is to compare the live births in a given area during a single calendar year with the infant deaths (that is, deaths of babies under 1 year of age) occurring during that same year. Of course, the babies dying in that year are not all born in the same year nor in that same area, and of those born in the given calendar year not all who die under 12 months of age die in the calendar year of their birth. But this is the only feasible method as yet discovered for approximating an infant mortality rate for large areas, and it is sufficiently accurate for practical and comparative purposes; that is, for approximating the relative rank of different cities, States, and countries with respect to infant mortality.

The infant mortality rates of the various States and also of cities of at least 50,000 population within the registration area¹ of the United States for the year 1910 are shown in the following table, taken from a bulletin of the Federal Census Bureau.² All the rates in this table are computed by the established method.

¹ The Bureau of the Census designates as the registration area the area comprising States in which the registration laws are of suitable character and sufficiently well enforced to insure at least approximately complete (i. e., at least 90 per cent) returns of births and deaths. In addition to such States it includes certain cities in nonregistration States in which the returns are made with equal effectiveness under local ordinances.

² Bulletin 109, Mortality Statistics: 1910. Government Printing Office, Washington, 1912.

POPULATION, REGISTERED BIRTHS, DEATHS OF INFANTS UNDER 1 YEAR OF AGE, AND INFANT MORTALITY RATES FOR REGISTRATION STATES AND REGISTRATION CITIES HAVING A POPULATION OF AT LEAST 50,000 IN 1910.

AREA.	Popu- lation in 1910.
REGISTRATION STATES.	
Connecticut.....	
Maine.....	
Massachusetts.....	
Michigan.....	
New Hampshire.....	
Pennsylvania.....	
Rhode Island.....	
Vermont.....	
REGISTRATION CITIES OF 50,000 POPULATION OR OVER IN 1910.	
Connecticut:	
Bridgeport.....	102,054
Hartford.....	68,915
New Haven.....	133,606
Waterbury.....	73,141
Washington, D. C.....	331,009
Portland, Me.....	56,571
Massachusetts:	
Boston.....	
Brockton.....	
Cambridge.....	
Fall River.....	
Holyoke.....	
Lawrence.....	
Lowell.....	
Lynn.....	
New Bedford.....	
Somerville.....	
Springfield.....	
Worcester.....	
Michigan:	
Detroit.....	465,766
Grand Rapids.....	112,571
Saginaw.....	50,510
Manchester, N. H.....	70,063
New York, N. Y.....	4,766,883
Bronx Borough.....	430,980
Brooklyn Borough.....	1,634,351
Manhattan Borough.....	2,331,542
Queens Borough.....	244,041
Richmond Borough.....	85,969
Pennsylvania:	
Allentown.....	
Altoona.....	
Erie.....	
Harrisburg.....	
Johnstown.....	
Philadelphia.....	1,
Pittsburgh.....	
Reading.....	
Scranton.....	
Wilkes-Barre.....	
Rhode Island:	
Pawtucket.....	51,622
Providence.....	224,336

1 Provisional figures; exclusive of stillbirths.

2 Exclusive of stillbirths.

3 Based on provisional figures for births.

4 The figures for Rhode Island are exclusive of Providence and Pawtucket.

5 Returns of births not received from State board in time for inclusion.

APPENDIX III.

THE MILK SUPPLY.

[A study by the Dairy Division, United States Department of Agriculture, May 23 to June 16, 1913.
Conducted by L. B. Cook, C. E. Clement, and B. J. Davis.]

Between the dates of May 23 and June 16, 1913, the Dairy Division, United States Department of Agriculture, made a study and survey of the milk supply of Johnstown, Pa. This study consisted of a chemical and bacteriological examination of samples and an inspection of the sources of supply. The Government score card was used for all inspection work. This work showed that about 4,000 gallons of milk were consumed daily in the city, or an average of a little over one-half pint per capita. About two-thirds of this milk is shipped over the Baltimore & Ohio and the Pennsylvania Railroads, but by far the most over the Baltimore & Ohio. The sources of the milk supply may easily be divided into city cow dairies, farmer milk dealers, dairy farms, city milk plants, and stores. Each of these will be discussed separately.

CITY COW DAIRIES.

About 150 cows are kept within the city limits. Most of these dairies are owned by foreigners and consist of two or three cows. The city dairies produced about 150 to 200 gallons of the city's milk supply. These dairies are very filthy and the sanitary conditions bad. The health of the cows is somewhat questionable, because the majority are stabled in small stables throughout the year. These stables are so small and the cows so crowded in that in some stables they have to take turns in lying down. The stables frequently have no means of ventilation or lighting except one or two small openings in the sides of the building. Most of the stables were located near contaminating surroundings, such as manure piles and outside closets.

The food for the cows in many of these dairies was fermented and in a bad condition, due to its being a wet mixture which was prepared far in advance of feeding.

The utensils were very poor in construction, most of them having open seams and in a condition impossible to clean properly. The pails were of the common cheap open type. In nearly all cases city water was used for all purposes.

The cows were not in as bad a condition as they might have been with regard to cleanliness, although very little bedding was used, but the manure as a rule was not left standing in the stable, which accounts partly for the condition of the cows.

The uncleanness of the stable was marked, and usually no credit was given under this heading. Very few whitewashed stables were found, while cobwebs, dirt, and dust abounded nearly everywhere.

The manure was removed to a box or pile near the stable. Some of these boxes were covered, but many were not.

These city dairies had no milk houses. As soon as the milk was milked it was taken to the house, strained, and delivered to the customers, who were usually the neighbors.

The milk utensils were often found dirty and being used for many other purposes. It is very doubtful if many of these milk pails are ever thoroughly scalded. After being washed they were kept almost any place, but were seldom put in a good place free from contaminating surroundings.

The milking was usually done by the women, who wore very dirty clothes and often milked with wet and filthy hands. No pretense was made to clean the cows or use a damp cloth.

The milk was not cooled, but sold while warm at 8 cents per quart. Most of the consumers who bought this milk had no ice or refrigerators, therefore it remained warm for some time or until consumed. Sometimes the milk was placed in earthen jars and set on the cellar bottom, but as a rule no effort was made at cooling. The milk was sold twice a day.

The average score for the 48 city dairies visited was 26.34 points. The highest was 43.50 and the lowest 16.75—12 scored below 20, 23 between 20 and 30, and 12 in the thirties, with 1 above 40.

FARMER MILK DEALERS.

By farmer milk dealers is meant those farmers who retail their own milk and possibly buy a little from other farms. There are about 26 such dealers in the city and they handle about 1,000 gallons of the city's milk supply. Some of these dairies were the source of the city's best milk. The average score of these dairies was 39.43. Most of this milk is hauled from 3 to 5 miles to the city, then peddled upon the street. These dealers bottle very little milk, and most of it is drawn from a faucet. They use covered wagons and some peddle garden truck—like flowers, onions, etc.—on the same wagon.

The cows, as a rule, seemed to be in good health, but very few had ever been tuberculin tested. The barns were of the sort typical of that section of the country, with a stone wall on one side and an overhanging shed on the other, which meant that the stables were dark, as light could only enter at the ends. The basement was used for all the farm animals, as horses, pigs, cows, chickens, etc., and the cow stable was not separated from the rest. The general construction was only fair. A few cement floors, tight walls, ceilings, etc., were found.

The ventilation was poor and conditions as to the cleanliness of the stable very bad. In many of the stables at this time of the year the manure was not removed daily and oftentimes it was piled near the stable. In general the cows could be well rated as to cleanliness, as they were outdoors both day and night.

At some of these farms milk houses were found, but many used the cellar of the house for handling and cooling the milk. These milk rooms were often used for the storage of other things and were not as clean as they should be. Some strained the milk at the stable, but many removed it to the milk room for straining.

Many of the utensils were of poor construction and were not thoroughly washed. The milk dealers usually scalded the pails and had a place to keep them after being washed. No covered pails or special milking suits were found and only one milk cooler. Most of the milkers milk with a dry hand, but do not clean the cows or use a damp cloth. Most of these farms had excellent water facilities, having running water at a temperature of from 50° to 55° F. This was used for washing utensils and cooling the milk.

The cooling was done by setting the 5-gallon cans in a trough of running water, but oftentimes the milk was not stirred, therefore the cooling was delayed. Some of these dairymen used ice on the farms and on the wagons.

The lowest score of these farmer milk dealers was 22.40 and the highest was 53.50. There were 4 farms scoring in the twenties, 8 in the thirties, 13 in the forties, and 1 above 50.

DAIRY FARMS.

Under this heading is meant the farms that ship or draw milk to the dealers. Some of these farms sold cream in the summer and milk in the winter. Two hundred and twenty-one of such farms were visited and their average score was 36.06, which was a little lower than the farmer dealer. Some of these farms were fairly good, but most of them were poor in their facilities and methods of handling milk. In general, these farms were like the farm dealers, but many were much worse. Very few had any milk houses, but handled the milk in the cellar or set the cans in some trough of running water. These farmers oftentimes had to carry their milk several miles over very bad roads to the railroad station where it was shipped to Johnstown. Very few covered pails or milk coolers were being used.

The lowest score for these farms was 22.50, while the highest was 70.6. Of these farms 52.9 per cent scored between 30 and 40.

Transportation.—Most of this milk was shipped over the Baltimore & Ohio Railroad from points between Somerset, Pa., and Johnstown. The milk was placed on the uncovered platform at the receiving station, then placed in baggage cars for transportation. No refrigerator cars were used. The total railroad haul on this line is about 40 miles. When the milk reaches Johnstown it is at a temperature of about 65° F., depending on the outside temperature. It is then unloaded onto an uncovered platform, and if the dealer does not take it away at once it is left in the sun to

get still warmer. One day after taking temperatures on arrival of the train, the inspectors returned in one and one-half hours and found about one-half of the milk still in the sun and the temperature of the milk was then about 15° warmer, or at a temperature of about 85° to 90° F.

Some of the milk shipped over the Pennsylvania Railroad comes a longer distance, but no refrigerator cars are used for the Johnstown supply and about the same conditions exist.

CITY MILK PLANTS.

There are about 15 city milk dealers. These dealers have their milk shipped in or hauled on wagons. The two large dealers in Johnstown handle about one-half of the city's milk supply.

The small dealers have no milk plant, as they take the milk as delivered from the farm and peddle it direct. Most of them have a refrigerator for storage of any milk left over. They bottle very little, and a few use ice.

The two large milk companies pasteurize and bottle all of their retail trade. One of these dairies has four creameries outside of Johnstown from which it draws some of its supply when needed. These plants are located at Indiana, Martinsburg, Woodbury, and New Enterprise, Pa. These plants do a considerable cream and ice cream business; some of them also pasteurize the milk before it is shipped to Johnstown, where it may be repasteurized and is bottled.

The sanitary conditions in these plants were found to be poor and no ice was used on the wagons. Apparently, from the bacterial results, the pasteurizing did very little, if any, good. The flash method was used at a temperature of about 165° F., and after pasteurizing the milk was exposed to much contamination.

The average score of all of these plants was 39.37. Some of the plants received a higher score than they really deserved, because they had no real plant but only a refrigerator and a place to wash the utensils, the milk not being brought to the plant.

The milk cans as returned to the farmer were in a very bad condition, as these plants do not properly wash them. Some of them rinse the cans, while others do not even do that; consequently when the farmer receives the cans they have sour milk in them and very bad odors. With a farmer's limited means at hand it is nearly impossible to get these cans in proper condition to again ship sweet milk in them.

One creamery at Friedens, Pa., ships about 100 gallons of milk direct to some of the small city dealers and stores.

STORES HANDLING MILK.

A great many of the stores sell milk. Some of these buy bottled milk, while others buy direct from the farmer and sell dipped or faucet milk. Most of this milk is sold as an accommodation to customers. Many of these stores have ice boxes or refrigerators to keep the milk cold. However, some of the stores have no facilities for keeping the milk at a low temperature and the cans or bottles are allowed to sit on the floor until all the milk is sold. These stores do not wash the cans or bottles. Much of this store milk is open to considerable contamination from dust, dirt, and flies.

The average score of the stores handling bulk milk was 46.11. The highest was 72.75, and the lowest 12.30.

BACTERIOLOGICAL AND CHEMICAL RESULTS.

Samples for this work were taken at as many sources as possible. The samples taken at the city cow dairies gave a low bacteria count, due to the sample being taken immediately after milking. In all, 163 samples of milk were examined, 115 being from producers and 48 from dealers. The maximum bacteria count was 319 million per cubic centimeter, and the minimum count was 3,650 bacteria per cubic centimeter. This sample was taken from one of the city cow dairies and it was fresh milk direct from the cow.

The average count of all samples was 1,699,587 bacteria per cubic centimeter. Two samples were sour when taken at the railroad station.

7 samples, or 4.2 per cent, were under 50,000 bacteria per cubic centimeter.

6 samples, or 3.6 per cent, were between 50,000 and 100,000 bacteria per cubic centimeter.

31 samples, or 19 per cent, were between 100,000 and 500,000 bacteria per cubic centimeter.

22 samples, or 13.5 per cent, were between 500,000 and 1,000,000 bacteria per cubic centimeter.

45 samples, or 27.6 per cent, were between 1,000,000 and 10,000,000 bacteria per cubic centimeter.

44 samples, or 27 per cent, were between 10,000,000 and 50,000,000 bacteria per cubic centimeter.

8 samples, or 4.9 per cent, were over 50,000,000 bacteria per cubic centimeter.

This table shows that 59.5 per cent of the samples contained over 1,000,000 bacteria per cubic centimeter.

The fat was only determined on 161 samples, and the average per cent was found to be 3.58. The minimum per cent was 1.2 and the maximum 5.

14 samples, or 8.7 per cent, contained below 3 per cent fat.

108 samples, or 66.1 per cent, contained between 3 and 4 per cent fat.

39 samples, or 25.1 per cent, contained 4 per cent fat or above.

The total solids was determined on 93 samples with an average of 11.68.

GENERAL SUMMARY.

The bacterial results and the inspection work show that the milk sold in Johnstown, Pa., is very poor. The scores are low and most of the milk has a bacteria count in the millions. This is easily explained by the fact that the city does no milk inspection work, therefore the general methods and ideas in use do not tend for clean milk. The general idea is that if milk is not sour it must be all right; then where the milk is pasteurized no particular pains are taken with its care. Our results show that pasteurizing did very little if any good. On the farms and in the city no particular methods or care are used to keep the bacteria count low.

1. There are 48 dairies in the city with an average score of only 26.84 out of a possible 100. On the whole, the city dairies were vile from a sanitary standpoint. While the bacteria counts taken on this milk were fairly low it must be remembered that milk produced at these places is delivered warm to the consumer; this milk is sold in the poorer sections, where there is usually no way to keep it cold until it is used, so that before it is finally consumed the bacteria count is probably extremely high.

2. The dairymen who operated farms and sold the milk from their own farms were in average condition for uninspected dairies. Their average score was 39.43 out of a possible 100.

3. Transportation facilities are very crude and there is an entire lack of care in handling the milk from the farm to the city.

4. The facilities for handling the milk in the city are very poor; many dealers have no equipment or means of refrigerating the milk or handling it properly. The average score of the city dairies was 39.37 out of a possible 100. There were only two plants inspected which were in fairly presentable condition. Pasteurization as carried on at the present time in Johnstown is a farce. This is shown by the fact that 52 farmers shipping milk to one of the dairies averaged 1,419,961 bacteria per cubic centimeter when the milk arrived at Johnstown, while samples taken from the milk supply handled by this dairy showed an average count of 18,337,500 bacteria per cubic centimeter, indicating that the milk was much worse after it had been "pasteurized" than it was before. Another large dairy did a little better, but the results obtained there showed a very incomplete pasteurizing process. Twenty-eight dairymen supplying milk to the latter dairy averaged 30,410,071 bacteria per cubic centimeter when the milk arrived at Johnstown, while the finished product as put out by the dairy averaged 3,150,083 bacteria per cubic centimeter.

5. A large amount of dipped milk is sold both from the wagons and from stores in Johnstown at the present time. Such a practice is at best insanitary, but carried on as it is in Johnstown it is a positive menace.

6. Bacteria counts showed that the milk averaged 1,699,587 and that 59.5 per cent of the samples showed over a million bacteria per cubic centimeter.

7. Aside from the bacteriological condition of the milk it was found to be in many cases lacking in the required food elements. Of 44 samples taken from milk dealers 29.5 per cent were found to be below the State standard for butter fat, while of 118 samples taken from producers, 22.9 per cent were found to be below the State standard for butter fat.

RESULTS OF THE INSPECTION WORK DONE IN JOHNSTOWN, PA.

Score.	City cow dairies.	Farm milk dealers.	Dairy farms.	City milk plants.	Stores.
0 to 10.....					
10 to 20.....	12			1	2
20 to 30.....	23	4	43		
30 to 40.....	12	8	117	4	
40 to 50.....	1	13	55	4	1
50 to 60.....		1	3	2	4
60 to 70.....			1		
70 to 80.....			2		1
80 to 90.....					
90 to 100.....					
Total ¹	48	26	221	11	8
Average score.....	26.34	39.43	36.06	39.37	46.11

¹ In all, 314.



